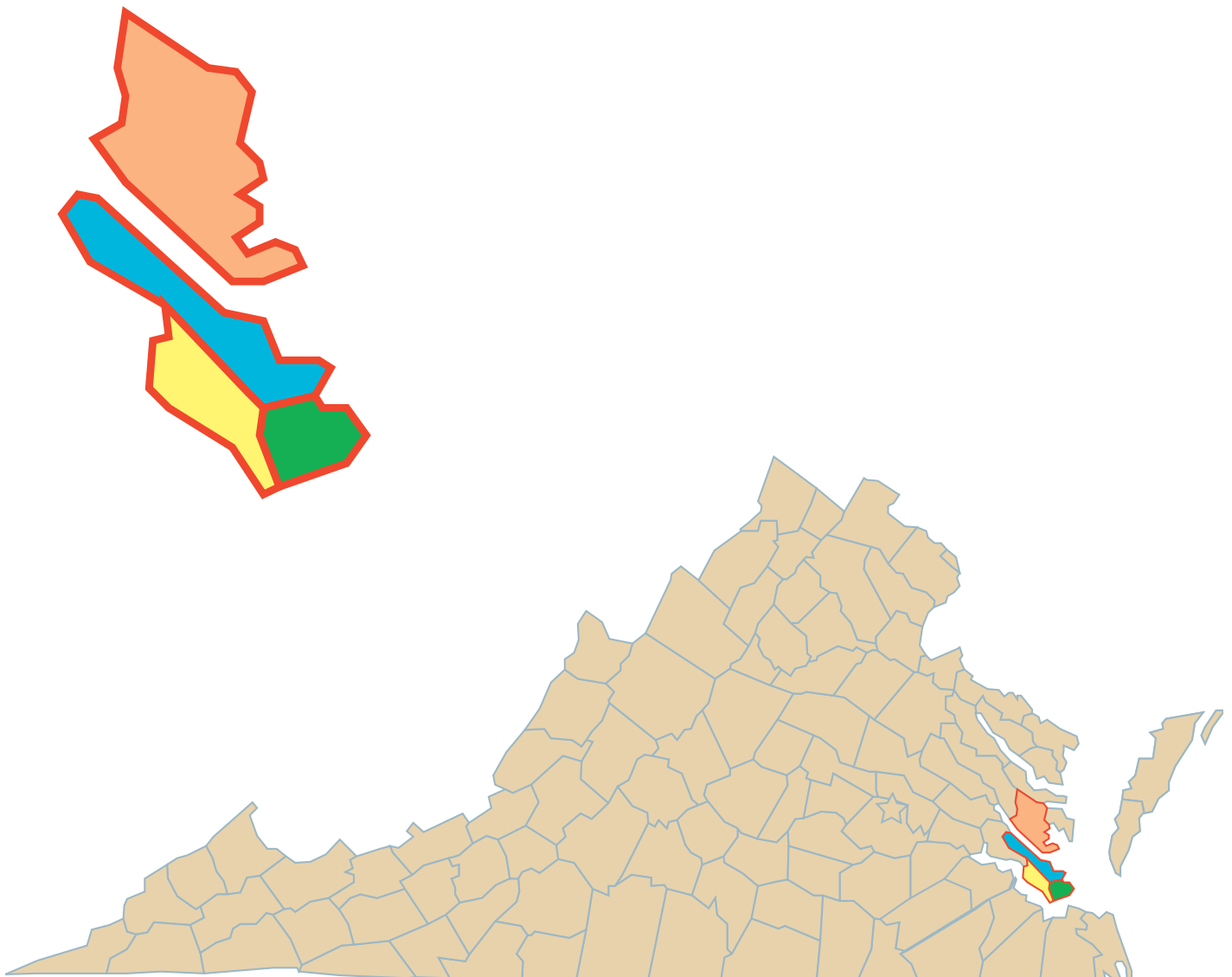


Community Profile of WIA XIV

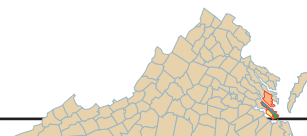
Gloucester County • James City County • York County • City of Hampton •
City of Newport News • City of Poquoson • City of Williamsburg





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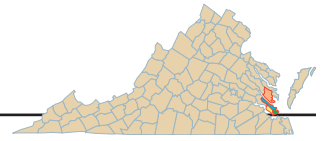
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Executive Summary

This report provides a demographic, economic, and educational profile of Workforce Investment Area XIV (WIA XIV), Peninsula Worklink. The purpose of these profiles is to assist on-going strategic planning efforts by providing a solid, data-driven, foundation for strategic decision-making. The primary findings from this report are:

- Between 2000 and 2010, WIA XIV will experience a major increase in its 55 and over population. The net result of this trend will be a significant “graying” of the overall population.
- One implication of this trend is that younger entry-level workers will be in short supply.
- WIA XIV is experiencing, and will likely continue to experience, a shift away from employment in Government and Manufacturing and toward employment in Services and Retail Trade.
- One implication of this shift is that the Service sector – specifically, technology, health care, and education – is expected to account for much of the demand for trained workers between 1998 and 2008.

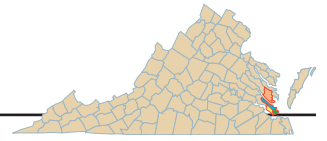




I. Introduction

This report provides a community profile of Workforce Investment Area XIV (WIA XIV). It was produced by the Virginia Employment Commission, with assistance from the Virginia Community College System and the Virginia Economic Development Partnership, at the request of the Special Advisor to the Governor for Workforce Development. It is intended to assist on-going strategic planning efforts within the Workforce Investment Boards by providing a solid, data-driven, foundation for strategic decision-making.

The report is divided into four major sections. The first contains a profile of regional demographic characteristics and trends, the second supplies similar information for the regional economy, and the third provides a profile of regional education characteristics and projected demands for training and skills. These are followed by a summary and conclusion section.

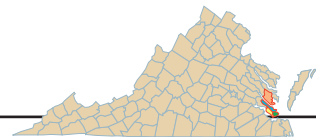




II. Demographic Profile

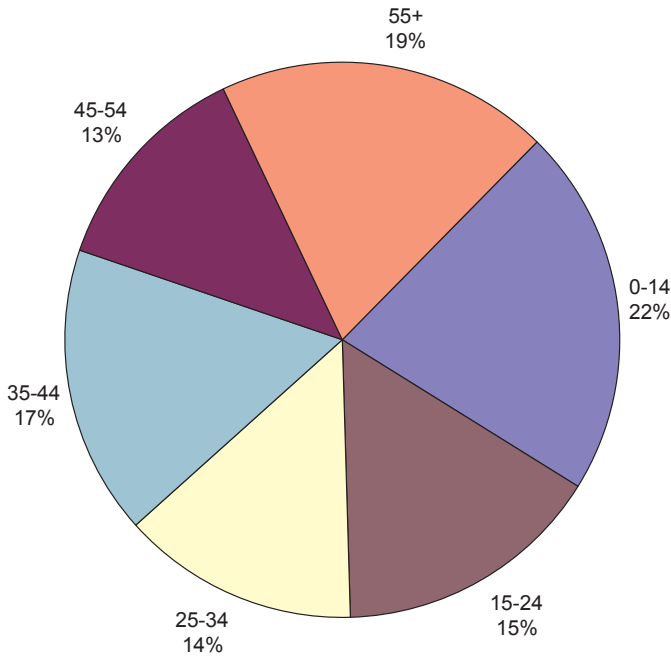
Population demographics are the single most important factor affecting WIA XIV's future labor force. Some key features of the area's population are as follows:

- Larger proportion of minorities. Where statewide minorities comprise 28 percent of the overall population, in WIA XIV they comprise 38 percent of the population.
- Projected to increase by 40,170 persons (or 8.2 percent) between 2000 and 2010. The largest increase is expected in James City County (14,898), followed by York County (12,503).
- Smaller proportion of individuals who "speak English less than well". Where statewide the proportion of individuals five and older who speak English less than well is 2.2 percent, in WIA XIV it is only 0.8 percent.
- The city of Newport News draws the largest number of in-commuters (46,369) of any locality within WIA XIV, followed by the city of Hampton (35,329). On the whole, WIA XIV exports about as many workers as it imports, with 31,559 individuals commuting into the area for work while 31,026 of the area's residents commute to localities outside of WIA XIV for work.

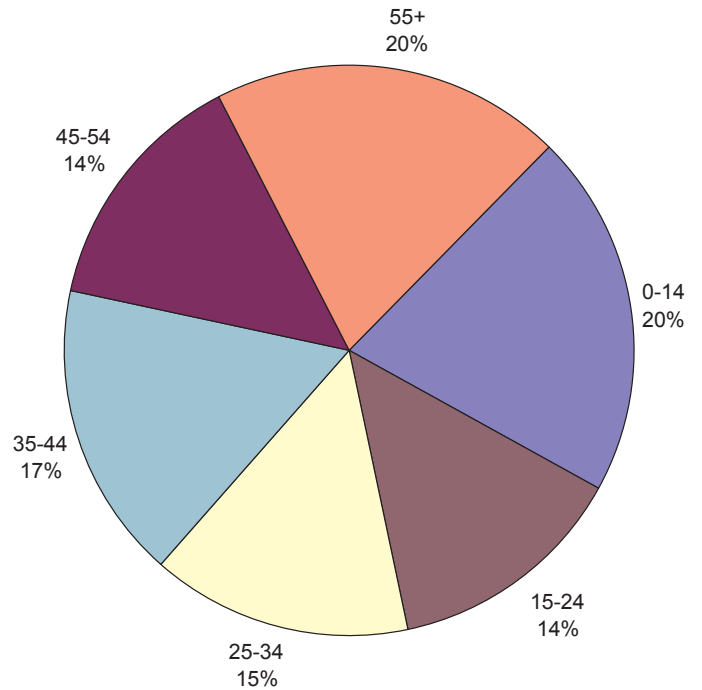


Population by Age Cohort

WIA XIV



Virginia



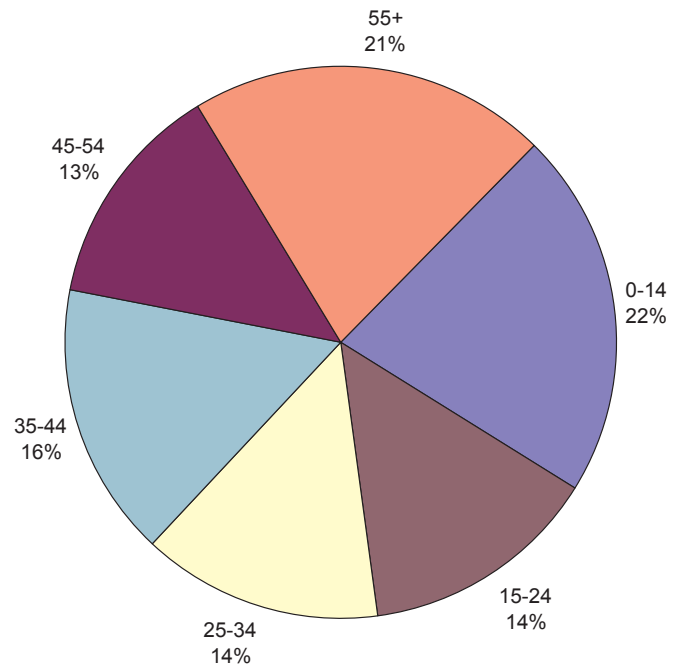
WIA XIV

0-14	105,296
15-24	75,181
25-34	68,125
35-44	83,545
45-54	62,414
55+	94,769
Total	489,330

Virginia

0-14	1,453,452
15-24	963,469
25-34	1,036,911
35-44	1,200,950
45-54	999,548
55+	1,424,169
Total	7,078,494

United States



United States

0-14	60,253,375
15-24	39,183,890
25-34	39,891,724
35-44	45,148,527
45-54	37,677,952
55+	59,266,437
Total	281,421,906

Subparts may not add to total due to rounding.
Source: 2000 Census.

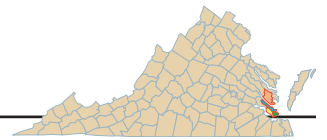


Population by Race/Ethnicity

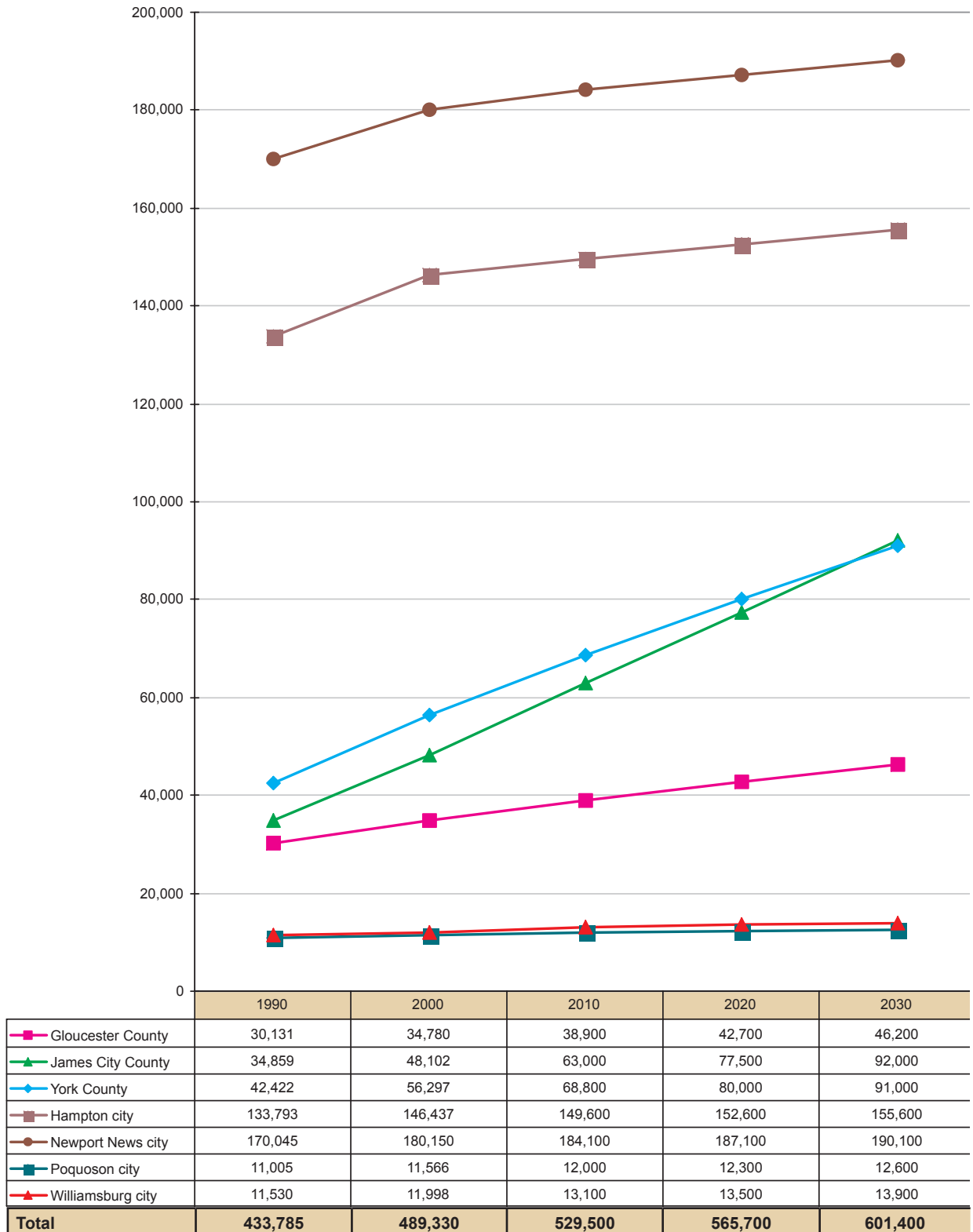
WIA VXi		
Total Population	489,330	100.0%
Race		
White	304,269	62.2%
Black or African American	155,523	31.8%
American Indian and Alaska Native	1,902	0.4%
Asian	10,391	2.1%
Native Hawaiian and Other Pacific Islander	466	0.1%
Other and Multi-Race	16,779	3.4%
Ethnicity		
Hispanic or Latino (of any race)	15,057	3.1%

Virginia		
Total Population	7,078,515	100.0%
Race		
White	5,120,110	72.3%
Black or African American	1,390,293	19.6%
American Indian and Alaska Native	21,172	0.3%
Asian	261,025	3.7%
Native Hawaiian and Other Pacific Islander	3,946	0.1%
Other and Multi-Race	281,969	4.0%
Ethnicity		
Hispanic or Latino (of any race)	329,540	4.7%

United States		
Total population	281,421,906	100.0%
Race		
One race	274,595,678	97.6%
White	211,460,626	75.1%
Black or African American	34,658,190	12.3%
American Indian and Alaska Native	2,475,956	0.9%
Asian	10,242,998	3.6%
Native Hawaiian and Other Pacific Islander	398,835	0.1%
Other and Multi-Race	22,185,301	7.9%
Ethnicity		
Hispanic or Latino (of any race)	35,305,818	12.5%



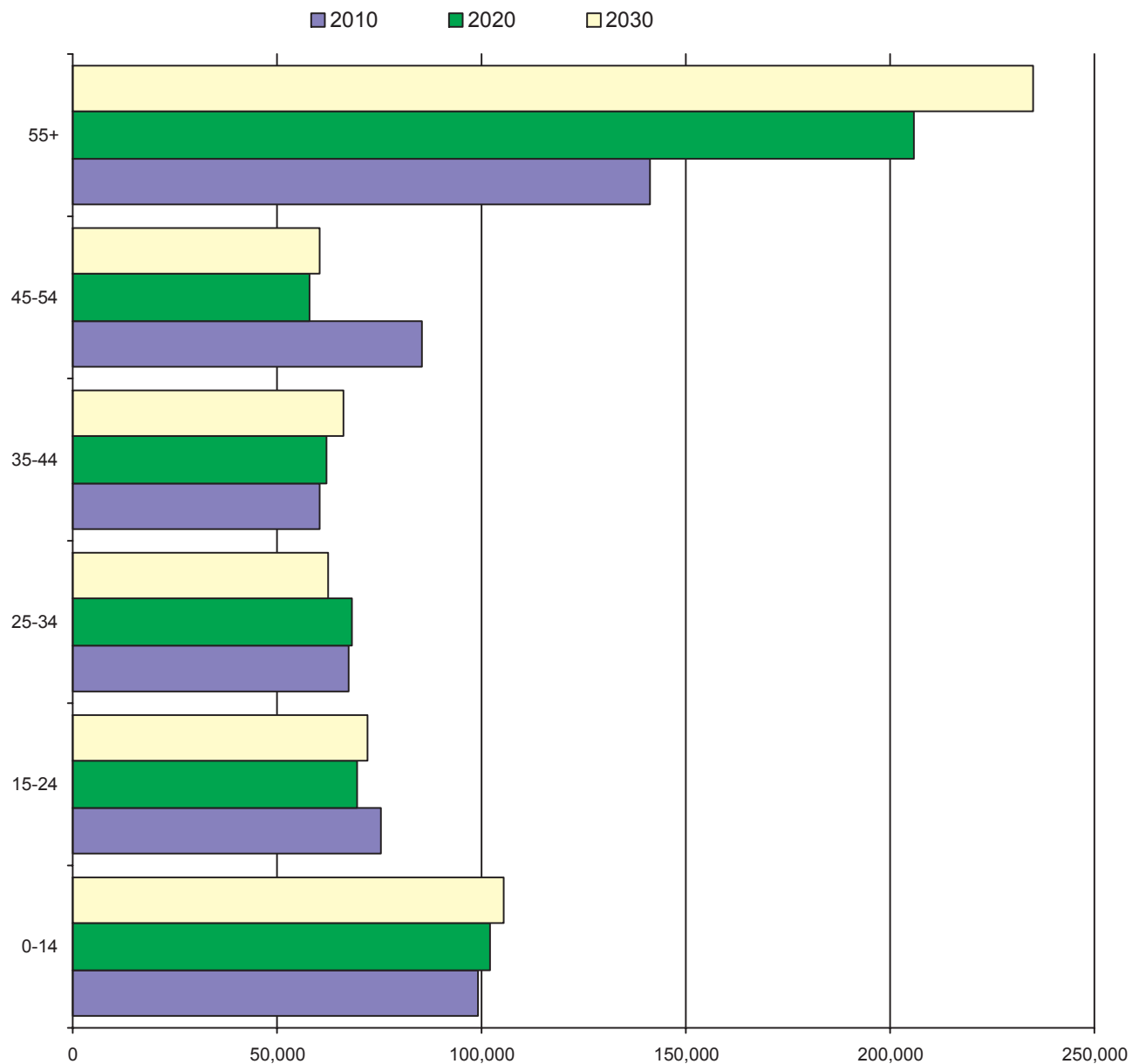
Population Change



Data for 2010 - 2030 are projections. Subparts may not add to total due to rounding.
Source: Virginia Employment Commission, 08/03, U.S. Census Bureau.



Population Projections by Age Cohort



	2010	2020	2030
0-14	99,138	102,272	105,487
15-24	75,537	69,570	71,993
25-34	67,534	68,508	62,316
35-44	60,378	61,893	66,355
45-54	85,514	57,720	60,316
55+	141,399	205,736	234,934
Total	529,500	565,700	601,400

Subparts may not add to total due to rounding.

Source: Virginia Employment Commission.



English Language Skills

(Age 5 and over)

WIA XIV		
	Total	Speak English less than well
Gloucester County	32,770	148
James City County	45,539	338
York County	52,569	343
Hampton city	137,303	1,048
Newport News city	165,897	1,666
Poquoson city	10,971	58
Williamsburg city	11,675	128
WIA XIV	456,724	3,729
Virginia	6,619,266	143,865
<i>Percent of Individuals who speak English less than well</i>		
Virginia	2.17%	
WIA XIV	0.82%	



Commuting Patterns¹

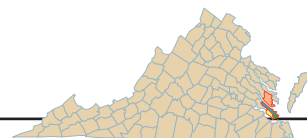
Out-Commute (From)	In-Commute (To)						
	Gloucester	James City	York	Hampton	Newport News	Poquoson	Williamsburg
	Gloucester	923	1,505	1,033	3,311	6	554
	James City	100	2,097	893	2,536	14	4,499
	York	241	1,954	6,880	7,640	270	1,672
	Hampton	121	935	1,673	16,713	330	620
	Newport News	319	3,496	5,106	16,109	273	2,393
	Poquoson	13	96	552	1,614	1,437	91
	Williamsburg	38	823	324	164	314	
Total To County/City From WIA XIV	832	8,227	11,257	26,693	31,951	893	9,829
Other VA Localities	1,624	2,588	2,400	8,636	13,882	127	1,665
Out of State	24		45		536		32
Total to County/ City:	2,480	10,815	13,702	35,329	46,369	1,020	11,526
Total In State	2,456	10,815	13,657	35,329	45,833	1,020	11,494
Total Out of State	24	0	45	0	536	0	32

Source: "In-Commuting Patterns" and "Out-Commuting Patterns," 2000 Census data, Virginia Employment Commission, http://www.vec.state.va.us/vecportal/lbrmkt/lmi_menu.cfm

1. Empty cells within the table indicate that the area's commuting represents less than .2% of total commuting or may be zero.
2. Total Commuting to/from WIA= Other VA Localities + Out of State

Example of how to use the Commuting Patterns table:

"How many of Hampton's residents commute to York County?" On the horizontal or To axis, locate the column labeled York. On the vertical or From axis, locate the row labeled Hampton. The intersection of the row and column, 1,673, is the number of Hampton's resident that commute to York County.



Commuting Patterns¹

Out-Commute (From)		Total From County/ City To WIA XIV	Other VA Localities	Out of State	Total From County/C ity:	Total In State	Total Out of State
	Gloucester	7,332	2,725		10,057	10,057	0
	James City	10,139	2,446		12,585	12,585	0
	York	18,657	3,212	70	21,939	21,869	70
	Hampton	20,392	11,435		31,827	31,827	0
	Newport News	27,696	10,047	118	37,861	37,743	118
	Poquoson	3,803	579	30	4,412	4,382	30
	Williamsburg	1,663	318	46	2,027	1,981	46

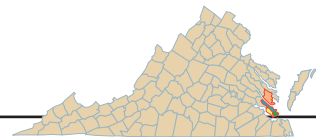
<i>Total WIA Commuting²</i>	
Total Commuting To WIA:	31,559
Total Commuting From WIA:	31,026



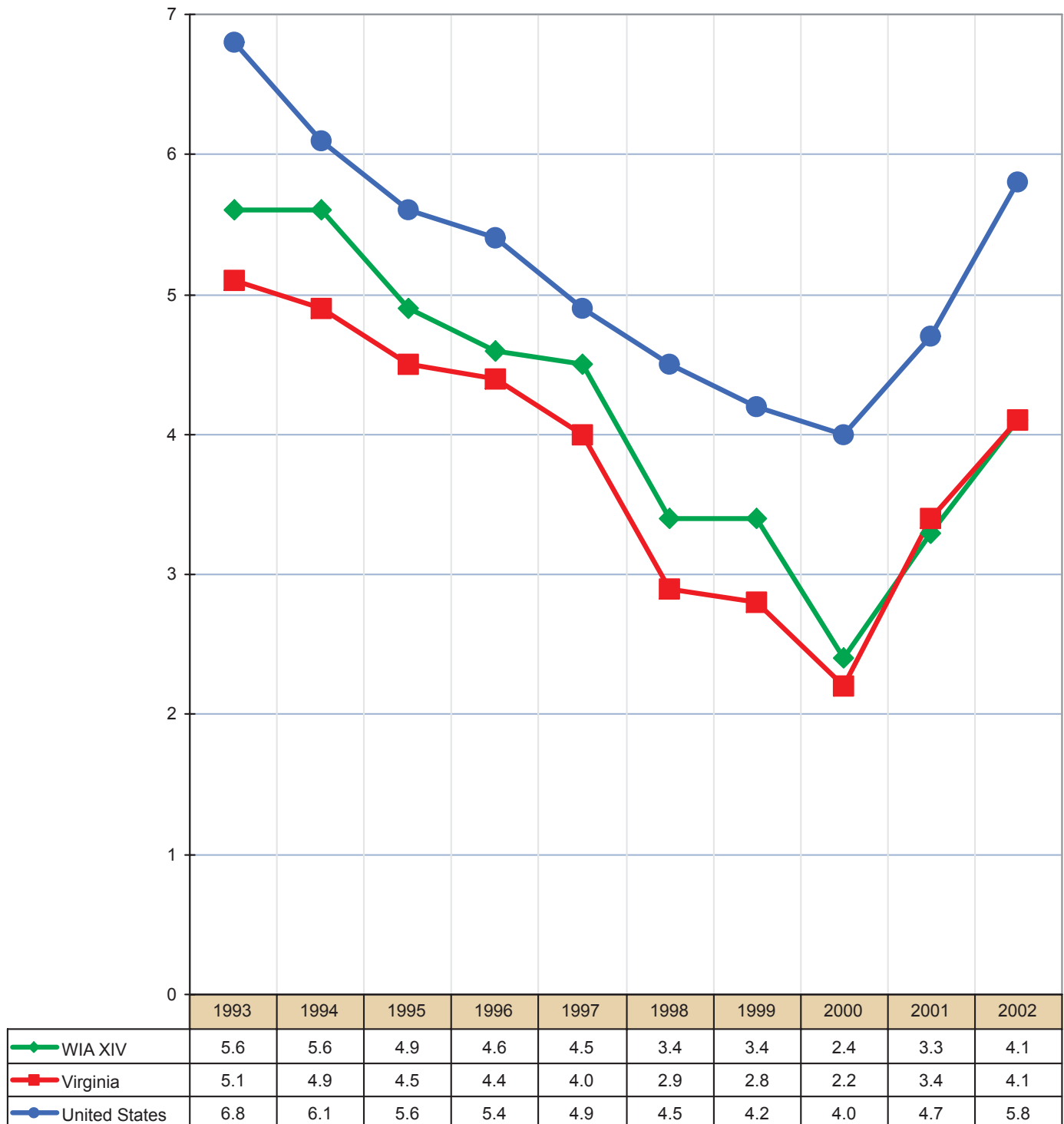
III. Economic Profile

Where population demographics provide information on underlying trends within the labor force, economic data provides more detailed information on the likely demand for specific types of workers. Some key features of WIA XIV's economy are as follows:

- In recent years, unemployment rates have fallen in line with the statewide average. In 2002, WIA XIV's unemployment rate was 4.1 percent, identical to the statewide average.
- Employment is concentrated in Government (21.1 percent), Manufacturing (13.8 percent), Retail Trade (12.6 percent), Accommodation/Food (10.3 percent), and Health Care (8.3 percent).
- Most recent new hires have been in Services (40.0 percent), Retail Trade (34.1 percent), and Construction (7.9 percent).
- Overall personnel turnover is above the statewide average (15.3 percent vs. 13.2 percent). Personnel turnover tends to be highest in Manufacture (22.4 percent), followed by Retail Trade (16.7 percent), Agriculture, Forestry, and Fishing (15.3 percent), Transportation, Communication, and Utilities (14.5 percent), and Construction (14.5 percent).
- Weekly wages were highest in Federal Government (\$1,003), followed by Professional/Technical (\$968), Manufacturing (\$855), Management (\$841), and Wholesale Trade (\$786).
- Industries with the largest proportion of workers at or near retirement age (55 and above) are Finance, Insurance, and Real Estate (15.9 percent), Manufacturing (14.8 percent), Services (14.4 percent), and Wholesale Trade (12.9 percent).
- Employment projections indicate that between 1998 and 2008, most employment growth will occur in Services (87,963 additional jobs), Retail Trade (29,840 additional jobs), and Transportation and Utilities (5,247 additional jobs). In contrast, Federal Government and Manufacturing are projected to lose -3,771 and -248 jobs respectively.
- Employment projections also indicate that between 1998 and 2008, the biggest growth in occupational employment will be in Systems Analysts (3,830 openings), Hand Packers and Packagers (3,550 openings), Telemarketers (2,800 openings), and Computer Support Specialists (2,530). Alternatively, the biggest declines in occupational employment will be in Ex Peripheral Computer Operators, Private Child Care Workers, and Railroad Brake, Signal, and Switch Operators.
- Based on January 2004 Unemployment data, the largest pools of available workers are in the Production, Office and Administrative Support, Sales, and Food Preparation and Serving Related occupations.



Unemployment Rate Trends



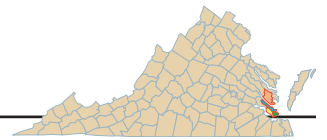


Employers by Size of Establishment

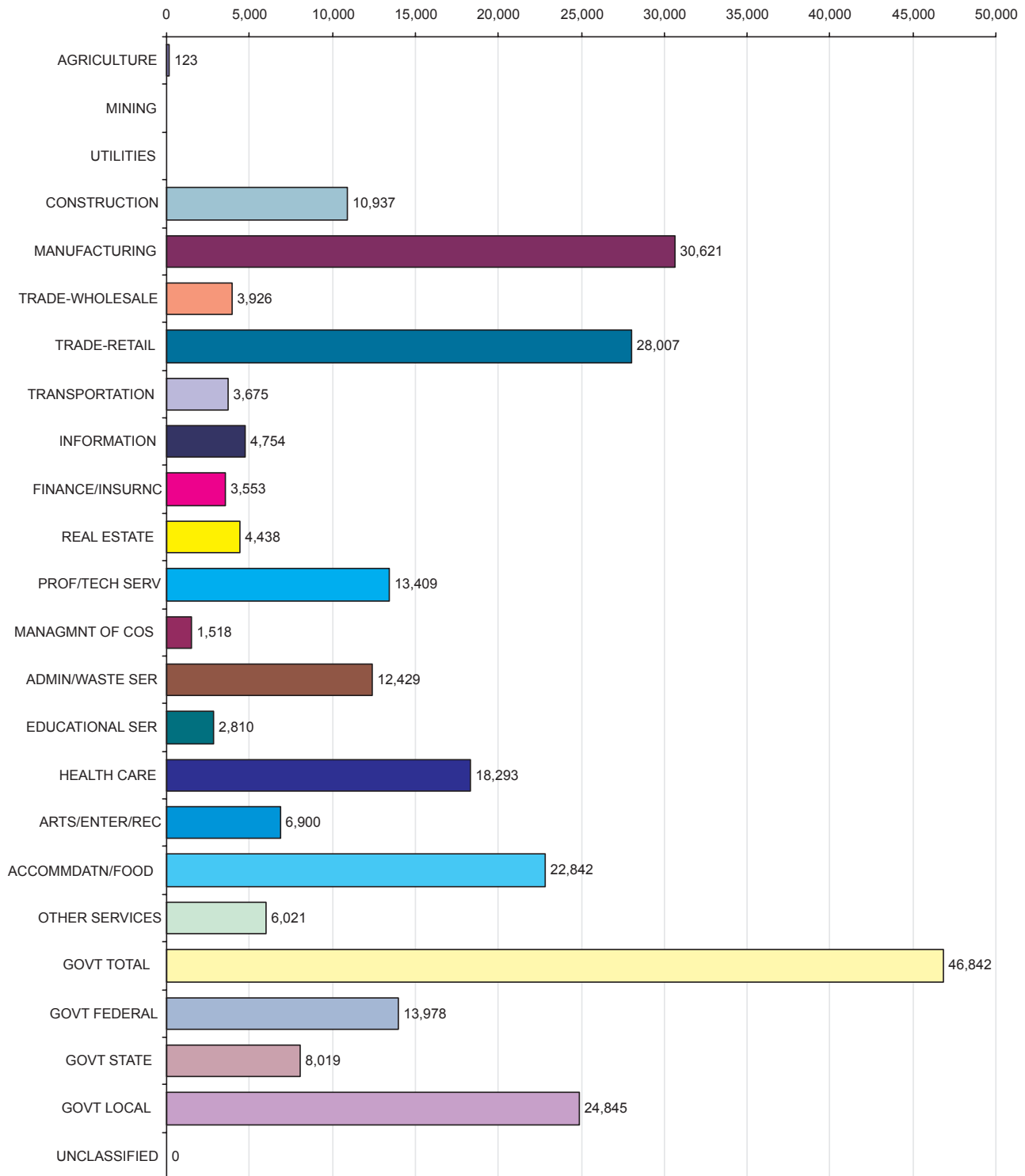
Number of Employees	WIA XIV	Virginia
0 - 4	4,794	107,195
5 - 9	2,162	35,763
10 - 19	1,521	25,141
20 - 49	1,122	18,074
50 - 99	347	6,136
100 - 249	193	3,388
250 - 499	48	1,029
500 - 999	31	409
1000 +	19	229
TOTAL	10,237	197,364

Employment by Size of Establishment

Number of Employees	WIA XIV	Virginia
0 - 4	9,042	188,377
5 - 9	14,608	238,634
10 - 19	20,664	340,363
20 - 49	34,856	553,221
50 - 99	23,921	422,392
100 - 249	28,941	503,348
250 - 499	17,499	352,727
500 - 999	21,128	274,493
1000 +	50,591	543,583
TOTAL	221,249	3,417,138



Employment by Industry



Total: 221,619

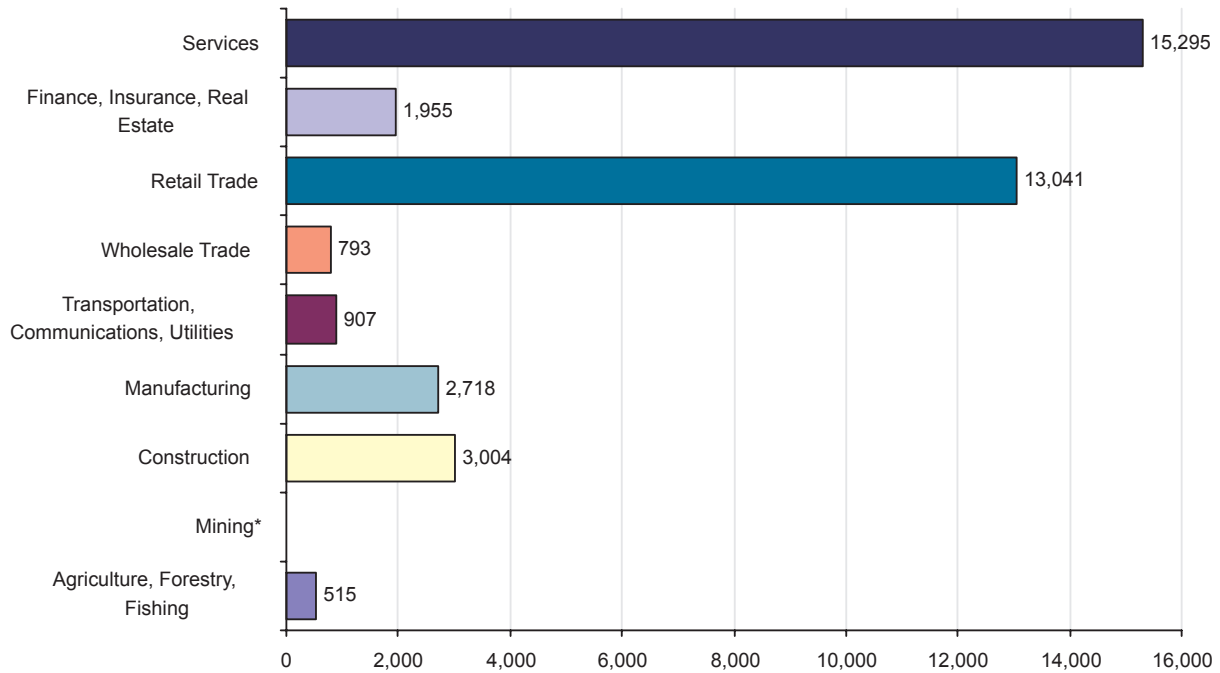
Source: Covered Employment and Wages, annualized 2002.

* Non-disclosed data



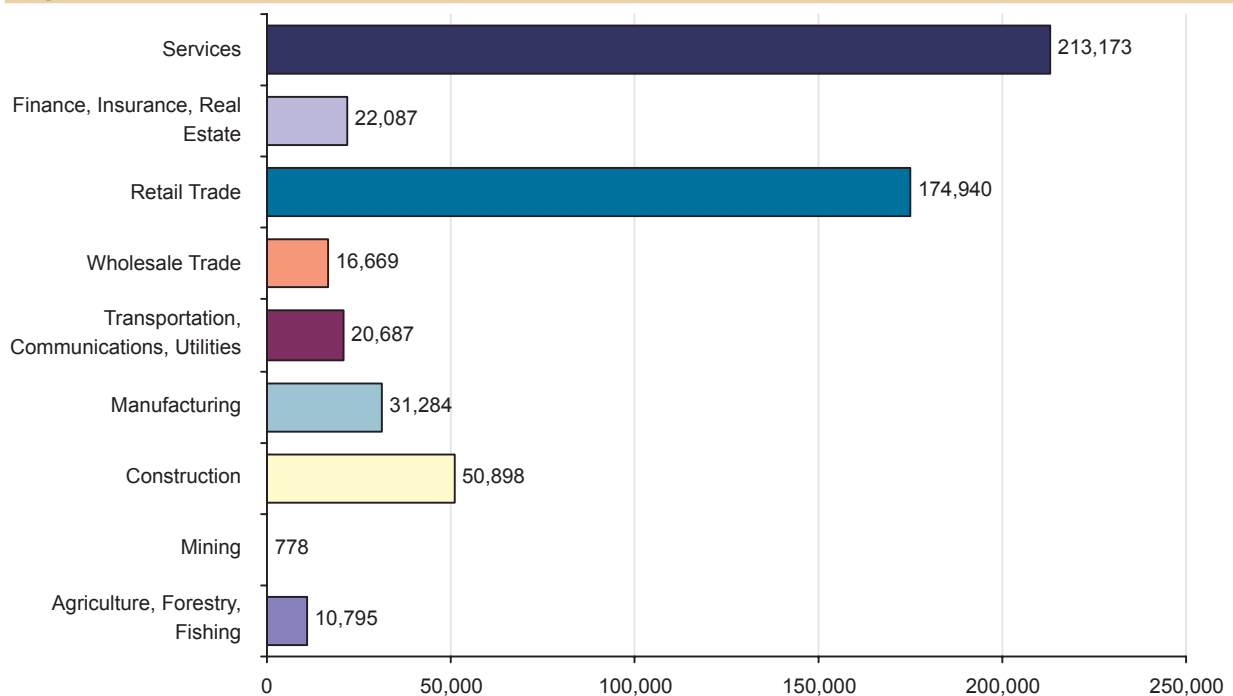
New Hires by Industry

WIA XIV



Total: 38,229

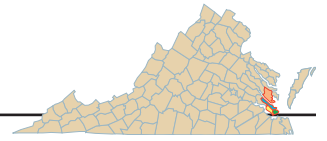
Virginia



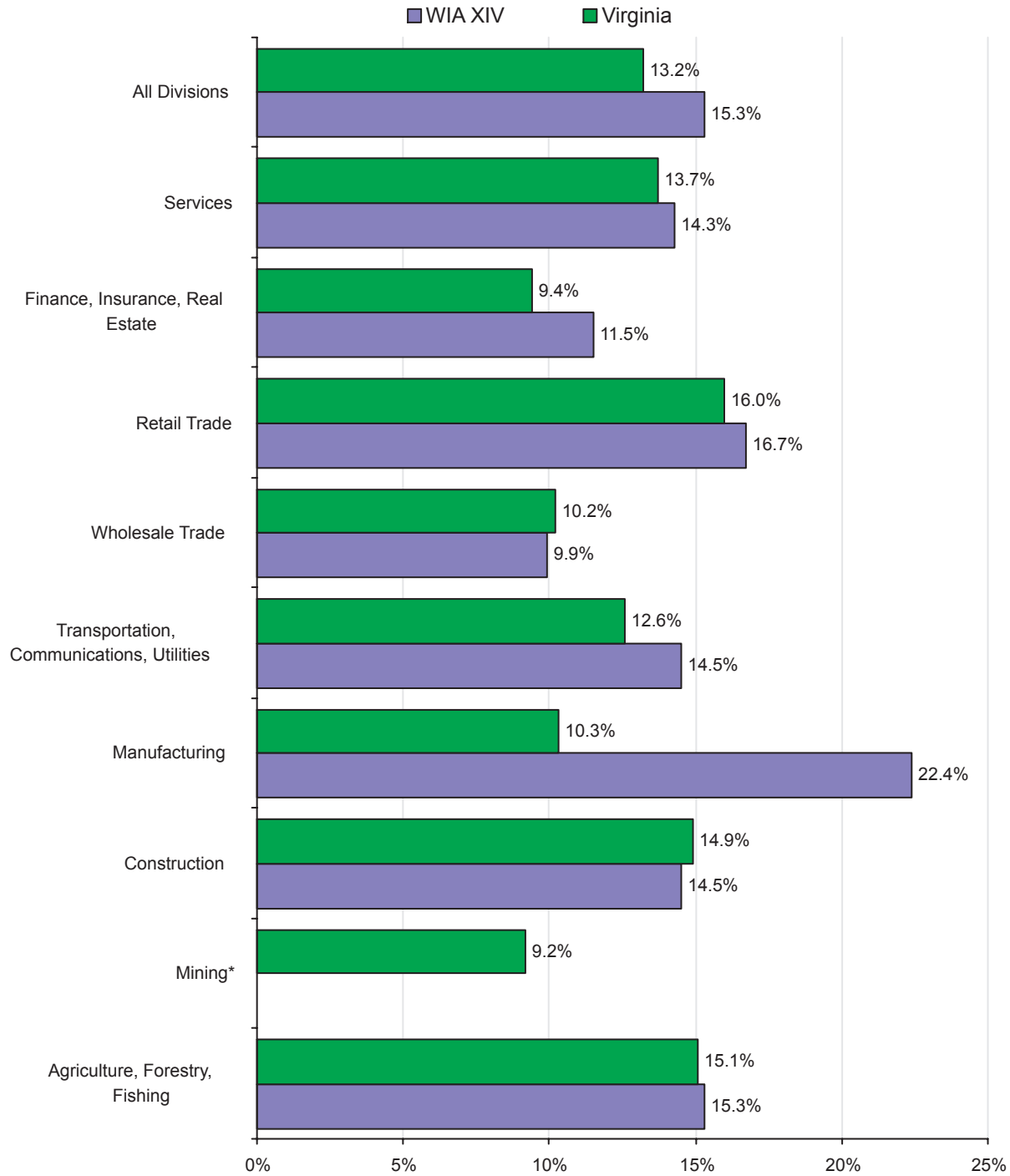
Total: 541,323

Source: U.S. Census Bureau, Local Employment Dynamics (LED) Program, 2002 annual averages.

* Non-disclosed data



Turnover by Industry

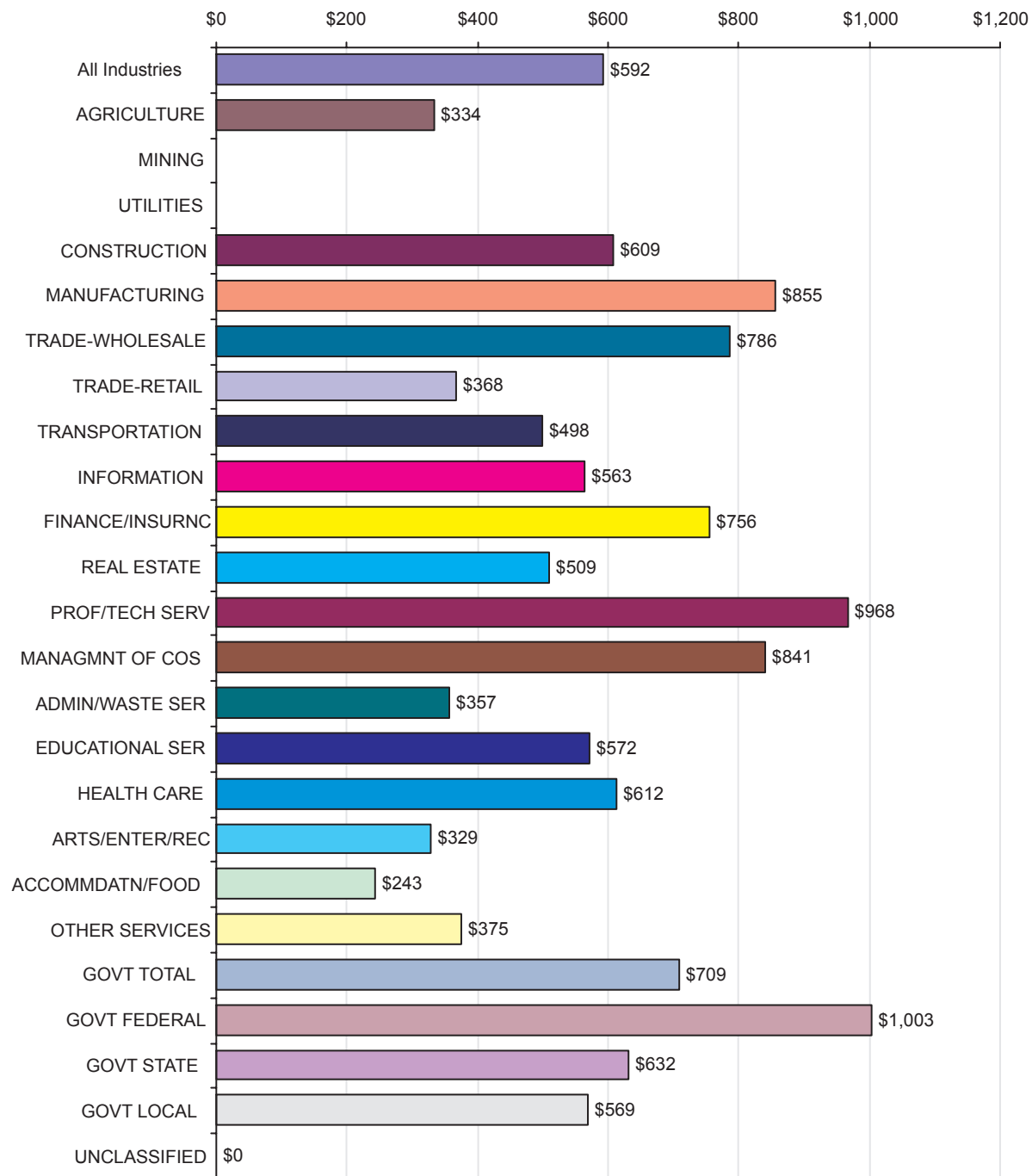


Source: U.S. Census Bureau, Local Employment Dynamics (LED) Program, 2002 annual averages.

* Non-disclosed data

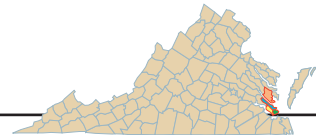


Average Weekly Wage by Industry



Source: Covered Employment and Wages, annualized 2002.

* Non-disclosed data



Age of Workers by Industry

WIA XIV

Virginia

	14 - 18	19 - 21	22 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 99	14 - 99
Total Employment	8,608	12,505	11,976	36,745	46,478	36,322	17,897	4,993	175,521
	106,356	162,652	180,601	659,050	739,013	576,728	282,064	81,995	2,788,457
Agriculture, Forestry, and Fishing	103	180	174	454	420	244	104	43	1,722
	2,219	3,048	3,158	9,842	9,481	6,372	2,705	1,600	38,424
Mining	0	0	0	0	0	0	0	0	0
	22	221	366	1,702	2,803	3,498	1,129	136	9,876
Construction	168	567	732	2,610	3,403	2,257	1,004	274	11,015
	3,907	10,799	13,521	50,770	61,204	41,178	18,359	6,009	205,745
Manufacturing	115	754	1,182	5,464	10,660	8,979	4,307	417	31,877
	2,142	9,334	14,693	72,949	106,504	94,364	46,938	7,579	354,504
Transportation, Communications, and Utilities	49	299	576	2,050	1,873	1,320	551	156	6,872
	1,059	4,542	8,097	42,450	52,051	40,960	16,851	3,199	169,208
Wholesale Trade	68	227	360	1,621	1,849	1,306	632	171	6,234
	1,691	4,449	6,486	33,407	43,317	32,948	15,708	4,557	142,564
Retail Trade	5,157	5,953	4,191	9,155	9,409	6,534	3,291	1,321	45,009
	67,335	76,880	57,338	136,252	130,099	94,331	48,135	20,155	630,522
Finance, Insurance, and Real Estate	152	496	559	1,805	2,299	1,913	1,026	338	8,587
	1,775	7,281	13,158	53,760	56,683	42,503	20,070	5,079	200,308
Services	2,796	4,030	4,203	13,586	16,564	13,769	6,980	2,273	64,201
	26,206	46,097	63,782	257,918	276,866	220,571	112,170	33,682	1,037,291



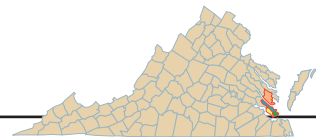
Total Employment by Industry

	Employment			Percent Change	
	Esti- mated 1998	Pro- jected 2008	Change	Total	Annual
Total All Industries	669,546	804,708	135,162	20.19%	1.86%
Agriculture, Forestry and Fishing, Total	6,434	7,416	982	15.26%	1.43%
Mining, Total	110	97	-13	-11.82%	-1.25%
Construction, Total	39,933	43,528	3,595	9.00%	0.87%
Manufacturing, Total	70,494	70,246	-248	-0.35%	-0.04%
Durable Goods Manufacturing, Total	46,898	46,349	-549	-1.17%	-0.12%
Nondurable Goods Manufacturing, Total	23,596	23,897	301	1.28%	0.13%
Transportation and Public Utilities, Total	35,872	41,119	5,247	14.63%	1.37%
Transportation, Total	26,482	30,761	4,279	16.16%	1.51%
Communications and Utilities, Total	9,390	10,358	968	10.31%	0.99%
Wholesale and Retail Trade, Total	159,036	190,748	31,712	19.94%	1.83%
Wholesale Trade, Total	25,786	27,658	1,872	7.26%	0.70%
Retail Trade, Total	133,250	163,090	29,840	22.39%	2.04%
Finance, Insurance, and Real Estate, Total	32,221	37,278	5,057	15.69%	1.47%
Services, Total	245,193	333,156	87,963	35.88%	3.11%
Federal Government (Except Post Office)	41,705	37,934	-3,771	-9.04%	-0.94%
State Government (Except Education and Hospitality)	7,177	7,944	767	10.69%	1.02%
Local Government (Except Education and Hospitality)	31,371	35,242	3,871	12.34%	1.17%

Employment by Major Occupation Group

	Employment			Openings		
	Estimated 1998	Projected 2008	% Change	Replacements	Growth	Total
Total, All Occupations	669,523	804,691	20.19%	163,220	135,168	298,530
Executive, Administrative and Managerial Occupations	44,914	54,201	20.68%	7,970	9,287	17,280
Professional Specialty Occupations	154,635	197,290	27.58%	30,530	42,655	73,220
Marketing and Sales Occupations	80,648	99,334	23.17%	24,820	18,686	43,520
Administrative Support Occupations, Clerical	111,643	128,303	14.92%	23,410	16,660	40,060
Service Occupations	112,683	138,785	23.16%	36,440	26,102	62,540
Agriculture, Forestry, and Fishing Occupations	8,923	10,388	16.42%	2,430	1,465	3,890
Precision Production, Craft and Repair Occupations	71,552	78,375	9.54%	16,710	6,823	23,570
Operators, Fabricators, and Laborers	84,525	98,015	15.96%	20,910	13,490	34,450

Source: Industry and Occupational Employment Projections, 1998 — 2008.
Projections are for the Norfolk-Virginia Beach-Newport News MSA.



Growth Occupations

	Employment			Openings			Wages
	Estimated 1998	Projected 2008	% Change	Replacements	Growth	Total	Median Annual Wage
Computer Engineers	1,406	3,287	133.78%	90	1,881	1,970	\$54,536
Computer Support Specialists	2,077	4,472	115.31%	130	2,395	2,530	\$29,585
Database Administrators	404	802	98.51%	70	398	470	\$50,704
Systems Analysts	4,485	8,039	79.24%	280	3,554	3,830	\$47,063
Computer Science Teachers, Pstscndry	141	242	71.63%	40	101	140	\$71,073
Health Diagnostics Teachers, Pstscndry	395	663	67.85%	110	268	380	\$59,170*
Home Health Aides	2,787	4,646	66.70%	390	1,859	2,250	\$16,537
Teachers, Preschool, Educ Srvcs	1,775	2,922	64.62%	380	1,147	1,530	\$17,538
Telemarketers Door-to-Door Sales	3,144	5,135	63.33%	810	1,991	2,800	\$18,370*
Child Care Workers	1,963	3,185	62.25%	190	1,222	1,410	\$15,597
Physician Assistants	303	488	61.06%	50	185	240	\$63,900*
Medical Assistants	1,281	2,050	60.03%	320	769	1,090	\$22,375
Physical, Corrective Therapy Assistants	412	648	57.28%	100	236	340	\$37,737
Speech Pathologists, Audiologists	489	757	54.81%	70	268	340	\$43,249
Personal & Home Care Aides	772	1,183	53.24%	200	411	610	\$14,235
Technical Writers	264	401	51.89%	70	137	210	\$43,490
Flight Attendants	275	414	50.55%	60	139	200	\$50,460
Insurance Adjusters/Examiners/Invstgtrs	543	812	49.54%	90	269	360	\$46,003
Hand Packers & Packagers	4,793	7,158	49.34%	1,180	2,365	3,550	\$15,880*
Bill & Account Collectors	1,390	2,071	48.99%	370	681	1,050	\$29,011

Declining Occupations

	Employment			Openings		
	Estimated 1998	Projected 2008	% Change	Replacements	Growth	Total
Railroad Brake, Signal & Switch Oprs	104	51	-50.96%	40	-53	40
Directory Assistance Oprs	73	47	-35.62%	20	-26	20
Station Installers & Repairers, Telephone	88	57	-35.23%	30	-31	30
Child Care Workers, Private	332	223	-32.83%	150	-109	150
Peripheral EDP Equipment Operators	110	78	-29.09%	20	-32	20
Computer Operators, Ex Peripheral	1,590	1,250	-21.38%	230	-340	230
Rail-Track Laying & Maint Equip Oprs	119	94	-21.01%	30	-25	30
Transportation Attendants	279	225	-19.35%	60	-54	60
Machine Tool Cutting Oprs, M/P	234	189	-19.23%	60	-45	60
Loan Interviewers	161	134	-16.77%	20	-27	20

Source: Industry and Occupational Employment Projections, 1998 — 2008. 2002 OES Wage Survey Data.

Projections are for the Norfolk-Virginia Beach-Newport News MSA. Wages are for WIA XIV.

* These figures reflect the Median Annual Wage for Virginia. Wage Data for these occupations in WIA XIV were not available.

Note: Virginia figures for Flight Attendants were not available. \$50,490 is the National Median Annual Wage for Flight Attendants.

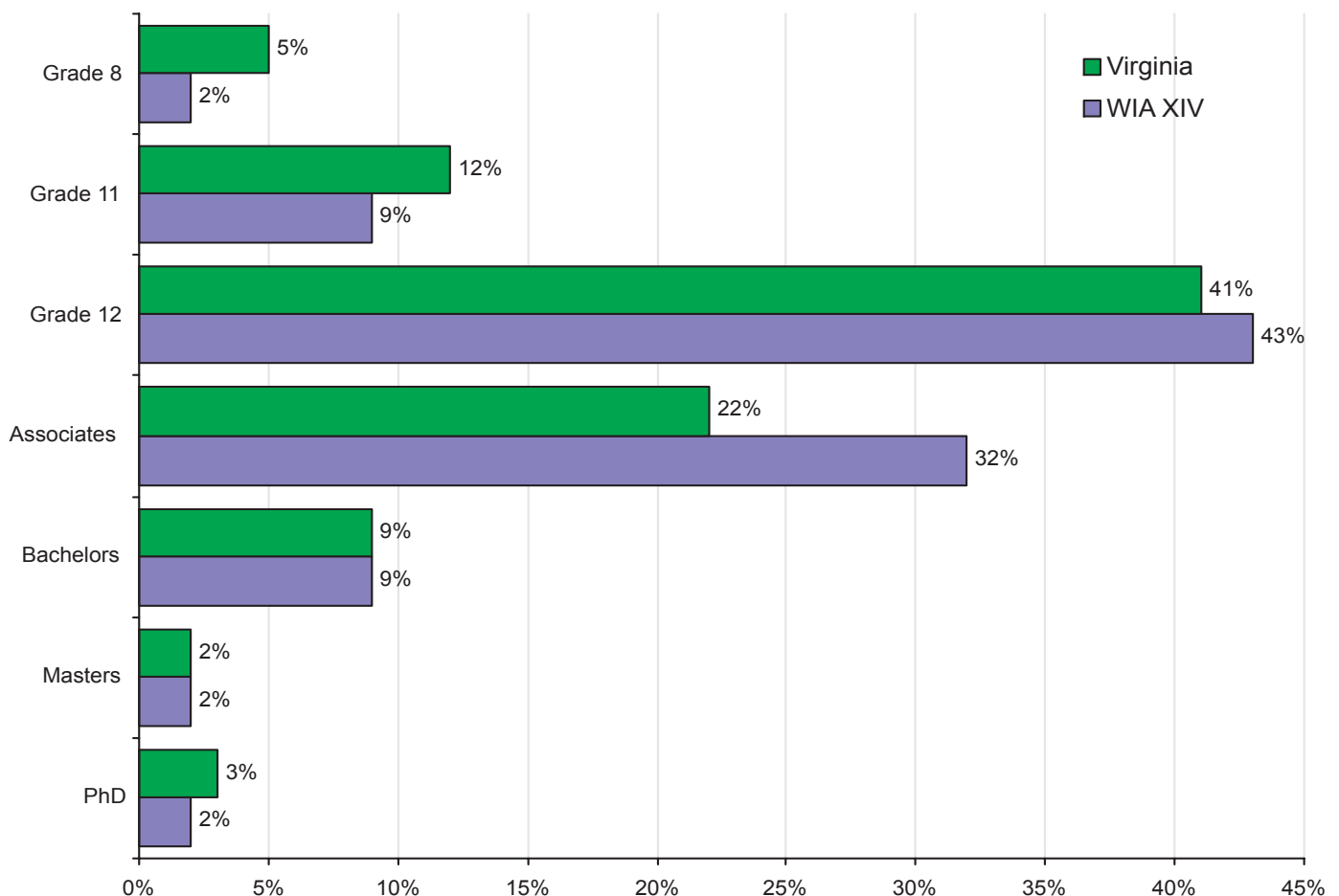


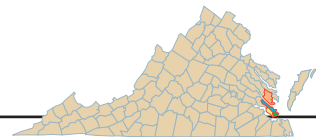
Characteristics of the Unemployed

Marketing the local labor force to new or expanding companies requires information about potential employees that would be available for immediate hire. Monthly data, collected as unemployed individuals apply for unemployment insurance benefits, provide information on various characteristics of the unemployed claimants. Demographic characteristics are recorded for age, race, sex, and education level. In addition, the industry of last employment and the occupation held in the most recent job is also part of the information collected when applicants register for unemployment insurance benefits.

As seen in the chart below, 43% of the unemployed claimants in Greater Peninsula have a grade 12 education level, as compared to only 41% of claimants statewide. On the other hand, at the level of Associates degree, Greater Peninsula has a much larger percentage of claimants relative to the state. Greater Peninsula has 3,857 unemployed claimants with an Associates degree, or nearly one-third of all unemployed claimants in the region.

Unemployed Claimants by Education Level





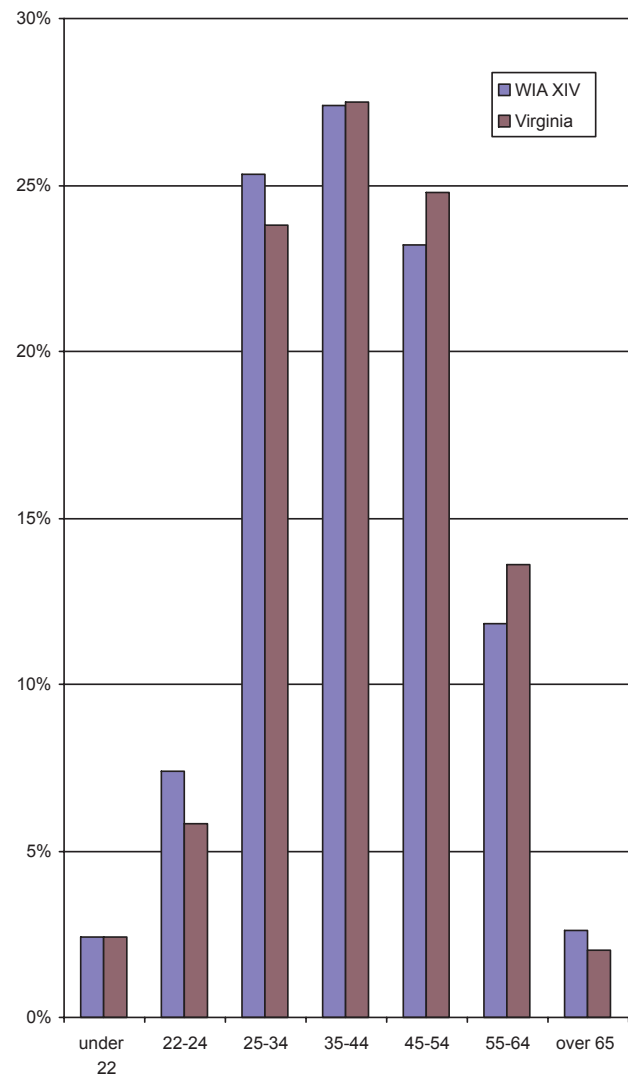
Characteristics of the Unemployed

Production workers comprise the largest category of unemployed beneficiaries in Greater Peninsula, accounting for almost 19% of total claimants in February 2004. Office and Administrative Support and Sales and Related workers also account for a significant share of the unemployed claimants, collectively representing over 25% of the total. Employers requiring workers in these occupation categories will find an abundant supply.

Claimants by Occupation

OCCUPATION	Number of Claimants
Management	742
Business and Financial Operations	275
Computer and Mathematical	309
Architecture and Engineering	175
Life, Physical, and Social Science	51
Community and Social Services	69
Legal	27
Education, Training, and Library	132
Arts, Design, Entertainment, Sports, and Media	267
Healthcare Practitioners and Technical	119
Healthcare Support	197
Protective Service	195
Food Preparation and Serving Related	1,400
Building and Grounds Cleaning and Maintenance	853
Personal Care and Service	389
Sales and Related	1,488
Office and Administrative Support	1,573
Farming, Fishing, and Forestry	38
Construction and Extraction	769
Installation, Maintenance, and Repair	494
Production	1,821
Transportation and Material Moving	660
Military Specific	17
SOC INA	11
TOTAL	12,071

Claimants by Age





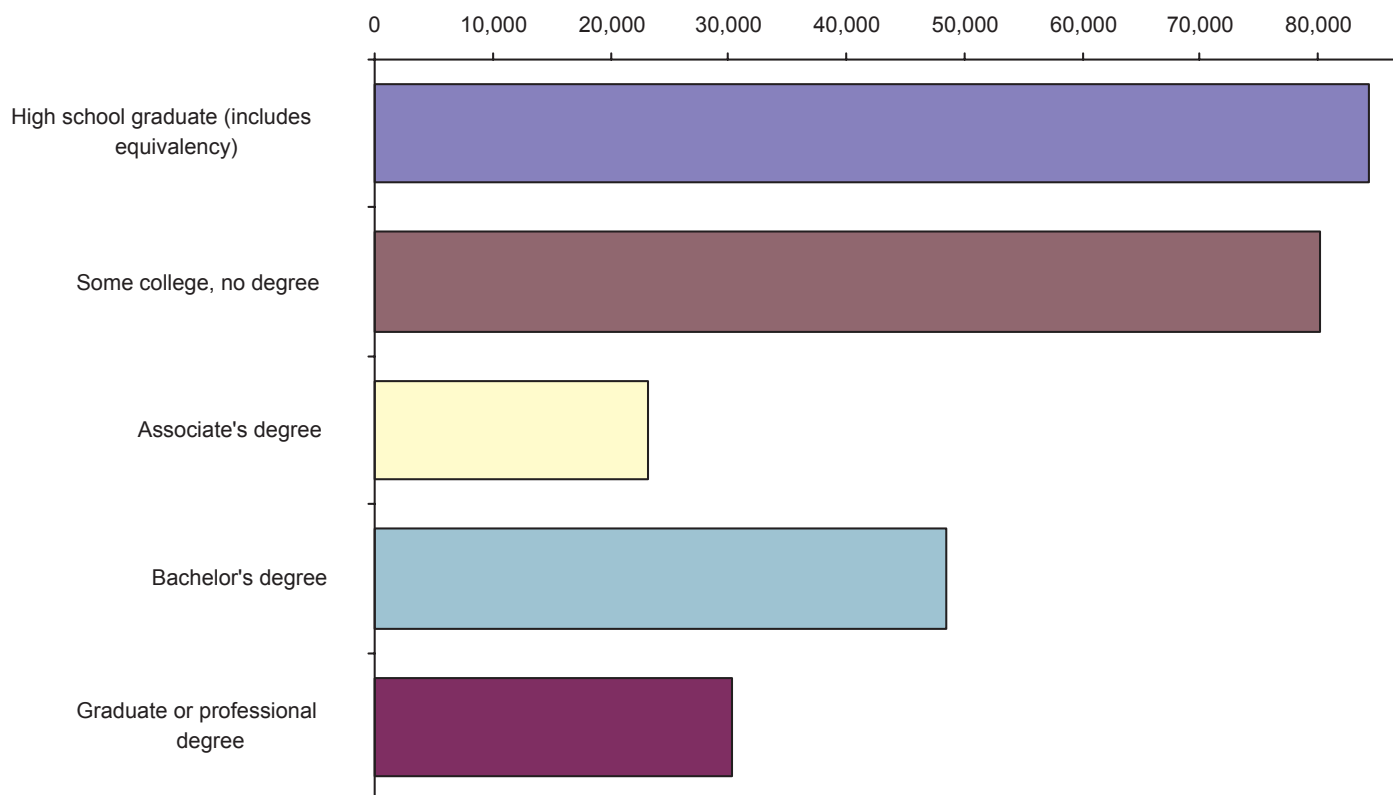
IV. Education Profile

Education data describe the human capital embodied in the current labor force and provide insight into the education and training that will be required to fill the ranks of the future labor force. Some key features of the WIA XIV's education and training environment are as follows:

- Educational attainment at the baccalaureate level and above is low relative to the statewide average.
- An assessment of the occupation-driven demand for local training needs indicates that between 1998 and 2008 the greatest demand for graduates from:
 - Post-secondary vocational programs will be in Administrative Assistant and Secretarial Science, Auto Mechanic/Technician, Cosmetologist, and Licensed Practical Nursing.
 - Associate's degree programs will be in Business Systems Networking and Telecommunications, Dental Hygienist, Information Sciences and Systems, Management Information Systems and Business Data Processing, Paralegal, and Registered Nursing.
 - Baccalaureate degree programs will be in Accounting; Child Care and Guidance Workers/Managers; Civil Engineering; Computer and Information Sciences; Computer Engineering; Computer Programming; Electrical, Electronics, and Computer Engineering; Elementary Teacher Education; General Education; General Finance; Human Resources Management; Information Sciences and Systems; Management Information Systems and Business Data Processing; Physical Education and Coaching; and Purchasing, Procurement, and Contracts Management.
 - Post-Baccalaureate degree programs will be in Law and Medicine
- An assessment of the occupation-driven demand for worker skills indicates that between 1998 and 2008 there will be a slight increase in required writing skills.



Education Level



Population 25 years and over	309,162
High school graduate (includes equivalency)	84,348
Some college, no degree	80,181
Associate's degree	23,171
Bachelor's degree	48,376
Graduate or professional degree	30,269



Occupation-Driven Training Projection

In this section we use Virginia Employment Commission's (VEC's) occupational employment projections for the Norfolk-Virginia Beach-Newport News Metropolitan Statistical Area (MSA),¹ in combination with a crosswalk developed by the National Crosswalk Service Center (NCSC) to "map" occupations into their prerequisite education and training programs.² Often these are many-to-many relationships where one occupation maps into several alternative education and training programs, and one program serves as a conduit into multiple occupations. The analysis is then further refined by using a classification scheme developed by the Bureau of Labor Statistics (BLS) to "sort" occupations according to the minimum degree or award typically required for employment in that occupation.³ Through this combination of steps, we are able to use VEC's occupational employment projections to predict the occupation-driven demand

for specific education and training programs within the Norfolk-Virginia Beach-Newport News MSA.⁴ The method used to accomplish this task is not new and has been successfully employed in earlier studies conducted in several states, including Virginia.⁵

The table that follows depicts the annual occupation-driven demand for training needs in the Norfolk-Virginia Beach-Newport News MSA for the 1998 to 2008 period, as derived from this analysis. As these data show, the largest numbers of needed graduates are in auto repair (e.g., Auto/Automotive Mechanic / Technician), business (e.g., Business Administration and Management), education (e.g., Education of the Autistic, Elementary Teacher Education, and General Education), and health (e.g., Registered Nurse and Licensed Practical Nurse).

1 The Norfolk-Virginia Beach-Newport News Metropolitan Statistical Area is comprised of Cloucester, Isle of Wight, James City, Mathews, and York counties, and the cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg.

2 The National Crosswalk Service Center (NCSC) is funded by the U.S. Department of Labor, Employment and Training Administration. This crosswalk identifies the prerequisite instructional programs necessary for employment in 651 specific occupations.

3 The Bureau of Labor Statistics classifies occupations according to eleven education and training categories. Four of these involve on-the-job training or work experience only and the remaining seven require some level of postsecondary education (i.e., first-professional degree, doctoral degree, master's degree, bachelor's degree, associate's degree, or postsecondary vocational training). For purposes of this study, we restrict the analysis to occupations that fall within these seven education and training categories.

4 More formally, the demand for education and training programs is calculated as:

$$DCIP_i = \sum Dcip_{ji}$$

Where,

$$Dcip_{ji} = (SOC_j)(GCIP_i / \sum Gcip_{ij})$$

and,

DCIP_i = the annual demand for instructional program i

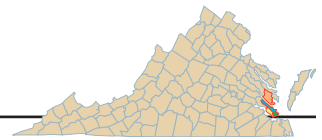
$\sum Dcip_{ji}$ = the annual demand for instructional program i across all occupation(s) j

SOC_j = the projected annual openings for occupation j

GCIP_i = Virginia graduates from instructional program i (for academic year 2000-01)

$\sum Gcip_{ij}$ = Virginia graduates from all instructional program(s) i (for academic year 2000-01) related to occupation j

5 Similar methods are used in at least seven states (California, Georgia, Idaho, Illinois, New Jersey, Utah, and Virginia) to project anticipated education and training demands. For an excellent exposition of this method see, William J. Drummond and Jan L. Youtie, "Occupational Employment, Demand for College Graduates, and Migration: A Statewide View," a report to the Board of Regents, University System of Georgia, 1999. For an example of how this method has been used previously in Virginia see, A. Fletcher Mangum, "System-Wide Needs Assessment for Virginia Education," State Council of Higher Education for Virginia, March 28, 2002, p.90.



Annual Occupation-Driven Training Needs in the Norfolk-Virginia Beach-Newport News MSA, 1998 - 2008

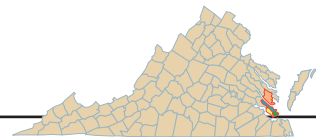
Program	Associate's Degree	Bachelor's Degree	Work Experience plus degree	First Professional	Master's Degree	Doctoral Degree	Postsecondary Vocational Training	Total
Accounting		181						181
Adapted Physical Education/Therapeutic Recreation		1						1
Administrative Assistant/Secretarial Science, General							41	41
Adult and Continuing Education Administration				1				1
Advertising			2					2
Aeronautical and Aerospace Engineering Tech./Technician	1							1
Aerospace, Aeronautical and Astronautical Engineering		9						9
Agricultural Animal Husbandry and Production Management		2						2
Agricultural Business and Management, General			1					1
Agricultural Economics		1						1
Agricultural Supplies Retailing and Wholesaling		1						1
Agricultural Teacher Education (Vocational)		5						5
Animal Sciences, General			1					1
Applied Mathematics, General					2			2
Architectural Engineering		3						3
Architectural Environmental Design		4						4
Architectural Urban Design and Planning					1			1
Architecture		24						24
Art History, Criticism and Conservation					6			6
Art Teacher Education		19						19
Art, General			9					9
Arts Management			2					2
Atmospheric Sciences and Meteorology		1						1
Audiology/Hearing Sciences					2			2
Auto/Automotive Mechanic/Technician							164	164



Program	Associate's Degree	Bachelor's Degree	Work Experience plus degree	First Professional	Master's Degree	Doctoral Degree	Postsecondary Vocational Training	Total
Automotive Engineering Tech./Technician							9	9
Aviation Systems and Avionics Main. Technologist/Technician							1	1
Barber/Hairstylist							9	9
Bible/Biblical Studies		2						2
Bilingual/Bicultural Education		12						12
Biochemistry						1		1
Biology Teacher Education		3						3
Biology, General						14		14
Business Administration and Management, General		12	931					943
Business Computer Programming/Programmer		24						24
Business Information and Data Processing Services, Other		2						2
Business Marketing and Marketing Management			11					11
Business Quantitative Methods and Management Science, Other					3			3
Business Services Marketing Operations		1						1
Business Systems Analysis and Design		10						10
Business Systems Networking and Telecommunications	60	5						65
Business Teacher Education (Vocational)		5						5
Business/Managerial Economics		2						2
Cardiovascular Tech./Technician	11							11
Cartography		2						2
Cell and Molecular Biology, Other						1		1
Chemical Engineering		7						7
Chemistry, General		7						7
Child Care and Guidance Workers and Managers, General		89						89
Child Care Provider/Assistant		25						25
Child Care Services Manager		6						6
Chiropractic (D.C., D.C.M.)					5			5

Education Profile

WIA XIV



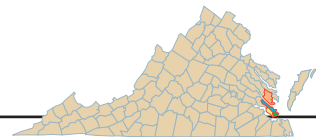
Program	Associate's Degree	Bachelor's Degree	Work Experience plus degree	First Professional	Master's Degree	Doctoral Degree	Postsecondary Vocational Training	Total
City/Urban, Community and Regional Planning					24			24
Civil Engineering, General		58						58
Civil Engineering, Other		1						1
Clinical Psychology					1			1
Clothing, Apparel and Textile Workers and Managers, General		1						1
College/Postsecondary Student Counseling and Personnel Servi					2			2
Commercial Photography							2	2
Communication Disorders, General					8			8
Communication Systems Installer and Repairer							18	18
Communications Technol./Technicians, Other							4	4
Community Organization, Resources and Services			3					3
Computer and Information Sciences, General		237						237
Computer and Information Sciences, Other		9						9
Computer Engineering		52						52
Computer Engineering Tech./Technician	12							12
Computer Installer and Repairer							5	5
Computer Main. Tech./Technician							14	14
Computer Programming		57						57
Computer Science		3						3
Computer Systems Analysis		12						12
Computer Teacher Education		7						7
Cosmetic Services, General							5	5
Cosmetologist							83	83
Counseling Psychology					1			1
Counselor Education Counseling and Guidance Services					42			42
Court Reporter							2	2
Dance							2	2
Data Processing Tech./Technician		3						3



Program	Associate's Degree	Bachelor's Degree	Work Experience plus degree	First Professional	Master's Degree	Doctoral Degree	Postsecondary Vocational Training	Total
Dental Clinical Sciences/Graduate Dentistry (M.S., Ph.D.)				2				2
Dental Hygienist	46							46
Dentistry (D.D.S., D.M.D.)				17				17
Design and Applied Arts, Other		9						9
Design and Visual Communications		25						25
Dietetics/Human Nutritional Services		3						3
Divinity/Ministry (B.D., M.Div.)				1				1
Drama and Dance Teacher Education		1						1
Earth and Planetary Sciences		1						1
Economics, General		11						11
Education Administration and Supervision, General			30					30
Education Administration and Supervision, Other			2					2
Education of the Deaf and Hearing Impaired		1						1
Education of the Emotionally Handicapped		1						1
Education of the Mentally Handicapped		1						1
Education of the Multiple Handicapped		1						1
Education of the Specific Learning Disabled		2						2
Education of the Speech Impaired		2						2
Education, General		395	59					454
Educational Supervision			2					2
Electrical and Electronic Engin.-Related Technol./Technician	14							14
Electrical and Electronics Equipment Installer and Repairer,							9	9
Electrical, Electronic and Communications Engin. Tech./Techn	20							20
Electrical, Electronics and Communication Engineering		84						84
Electromechanical Tech./Technician	3							3
Elementary Teacher Education		193						193
Elementary, Middle and Secondary Education Administration			6					6
Emergency Medical Tech./Technician							22	22

Education Profile

WIA XIV



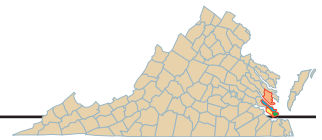
Program	Associate's Degree	Bachelor's Degree	Work Experience plus degree	First Professional	Master's Degree	Doctoral Degree	Postsecondary Vocational Training	Total
Engineering/Industrial Management		2	124					126
English Teacher Education		27						27
Enterprise Management and Operation, General			9					9
Farm and Ranch Management			1					1
Fashion and Fabric Consultant		1						1
Fashion Design and Illustration		11						11
Fashion Merchandising			1					1
Film/Video and Photographic Arts, Other							3	3
Finance, General		79	98					177
Financial Management and Services, Other			2					2
Financial Planning		8						8
Financial Services Marketing Operations		3						3
Fine Arts and Art Studies, Other			1					1
Fine/Studio Arts			4					4
Floristry Marketing Operations		4						4
Foods and Nutrition Science		2						2
Foods and Nutrition Studies, General		5						5
Foreign Languages Teacher Education		4						4
Forestry, General		1						1
French Language Teacher Education		1						1
Funeral Services and Mortuary Science	4							4
General Buying Operations		9						9
General Retailing Operations		12						12
Geological and Related Sciences, Other		1						1
Geology		7						7
Graphic Design, Commercial Art and Illustration			12					12
Health and Medical Administrative Services, Other			1					1
Health and Physical Education, General		8						8
Health and Physical Education/Fitness, Other		1						1
Health System/Health Services Administration			1					1
Health Teacher Education		13						13



Program	Associate's Degree	Bachelor's Degree	Work Experience plus degree	First Professional	Master's Degree	Doctoral Degree	Postsecondary Vocational Training	Total
Higher Education Administration			2					2
History Teacher Education		3						3
Home Economics Teacher Education (Vocational)		2						2
Home Furnishings and Equipment Installers and Consultants, G		1						1
Human Resources Management		93	23					116
Human Resources Management, Other		10						10
Industrial Design		6						6
Industrial Electronics Installer and Repairer							1	1
Industrial/Manufacturing Engineering		7						7
Information Sciences and Systems	75	159						234
Instrumentation Tech./Technician	1							1
Insurance and Risk Management		12						12
Insurance Marketing Operations		45						45
Interior Architecture		3						3
Interior Design		9						9
International Business			26					26
Investments and Securities		24	3					27
Junior High/Intermediate/Middle School Teacher Education		11						11
Juridical Science/Legal Specialization(LL. M.,M.C.L.,J.S.D./S					5			5
Labor/Personnel Relations and Studies		12	5					17
Landscape Architecture		1						1
Law (LL.B., J.D.)				72				72
Law and Legal Studies, Other				5				5
Legal Administrative Assistant/Secretary							2	2
Library Science, Other					2			2
Library Science/Librarianship					35			35
Logistics and Materials Management			1					1
Make-Up Artist							5	5
Management Information Systems and Business Data Processing,	118	109						227
Management Science					8			8

Education Profile

WIA XIV



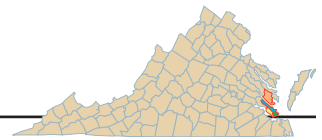
Program	Associate's Degree	Bachelor's Degree	Work Experience plus degree	First Professional	Master's Degree	Doctoral Degree	Postsecondary Vocational Training	Total
Marketing Management and Research, Other			1					1
Material Engineering		1						1
Mathematics					3			3
Mathematics Teacher Education		19						19
Mechanical Engineering		52						52
Medical Administrative Assistant/Secretary							8	8
Medical Office Management							3	3
Medical Pharmacology and Pharmaceutical Sciences				2				2
Medical Records Administration			1					1
Medical Records Tech./Technician	22							22
Medical Transcription							15	15
Medicine (M.D.)				108				108
Metal and Jewelry Arts			2					2
Microbiology/Bacteriology						1		1
Music Teacher Education		35						35
Natural Resources Conservation, General		1						1
Natural Resources Management and Protective Services, Other		1						1
Nuclear Engineering		4						4
Nuclear Medical Tech./Technician	2							2
Nursing (R.N. Training)	337							337
Nursing Anesthetist (Post-R.N.)	3							3
Nursing Science (Post-R.N.)	16							16
Nursing, Adult Health (Post-R.N.)	2							2
Nursing, Family Practice (Post-R.N.)	5							5
Nursing, Maternal/Child Health (Post-R.N.)	1							1
Nursing, Other	50							50
Nursing, Public Health (Post-R.N.)	1							1
Nursing, Surgical (Post-R.N.)	1							1
Occupational Therapy		21						21
Occupational Therapy Assistant	11							11
Oceanography		2						2



Program	Associate's Degree	Bachelor's Degree	Work Experience plus degree	First Professional	Master's Degree	Doctoral Degree	Postsecondary Vocational Training	Total
Operations Research					1			1
Optometry (O.D.)				5				5
Organizational Behavior Studies		23						23
Osteopathic Medicine (D.O.)				17				17
Painting			1					1
Paralegal/Legal Assistant	48							48
Parks, Recreation and Leisure Facilities Management		4						4
Parks, Recreation and Leisure Studies		4						4
Parks, Recreation, Leisure and Fitness Studies, Other		1						1
Pastoral Counseling and Specialized Ministries		1						1
Pharmacy (B. Pharm., Pharm.D.)				29				29
Pharmacy, Other				2				2
Photography							6	6
Physical Education Teaching and Coaching		77						77
Physical Therapy					40			40
Physical Therapy Assistant	34							34
Physician Assistant		24						24
Physics, General						4		4
Podiatry (D.P.M., D.P., Pod.D.)				2				2
Practical Nurse (L.P.N. Training)							186	186
Psychiatric/Mental Health Services Technician							6	6
Psychology, General					14			14
Psychology, Other					1			1
Public Administration			64					64
Public Administration and Services, Other			3					3
Public Health, General			1					1
Public Policy Analysis			2					2
Public Relations and Organizational Communications		25	1					26
Purchasing, Procurement and Contracts Management		77						77

Education Profile

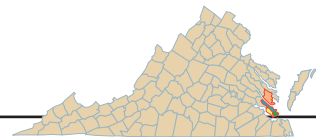
WIA XIV



Program	Associate's Degree	Bachelor's Degree	Work Experience plus degree	First Professional	Master's Degree	Doctoral Degree	Postsecondary Vocational Training	Total
Radio and Television Broadcasting Tech./ Technician							3	3
Reading Teacher Education		44						44
Real Estate		41					20	61
Recreational Therapy		2						2
Religious Education		1						1
Respiratory Therapy Technician	22							22
Robotics Tech./Technician	1							1
School Psychology					4			4
Science Teacher Education, General		10						10
Secondary Teacher Education		49						49
Social Science Teacher Education		5						5
Social Studies Teacher Education		12						12
Spanish Language Teacher Education		4						4
Special Education, General		33						33
Special Education, Other		3						3
Speech Teacher Education		1						1
Speech-Language Pathology					6			6
Speech-Language Pathology and Audiology					17			17
Sport and Fitness Administration/Management		4						4
Surgical/Operating Room Technician							13	13
Surveying		8						8
Taxation		10						10
Teacher Education, Specific Academic and Vocational Programs		21						21
Technical Teacher Education (Vocational)		5						5
Technical Theater/Theater Design and Stagecraft		2						2
Technology Teacher Education/Industrial Arts Teacher Educati		7						7
Theological and Ministerial Studies, Other		1						1
Theology/Theological Studies				1				1
Trade and Industrial Teacher Education (Vocational)		8						8
Travel Services Marketing Operations							27	27



Program	Associate's Degree	Bachelor's Degree	Work Experience plus degree	First Professional	Master's Degree	Doctoral Degree	Postsecondary Vocational Training	Total
Veterinarian Assistant/Animal Health Technician	7							7
Veterinary Clinical Sciences (M.S., Ph.D.)				1				1
Veterinary Medicine (D.V.M.)				11				11
Vocational Rehabilitation Counseling					2			2
Zoology, General						1		1
Grand Total	928	2,984	1,450	285	225	22	688	6,582



Work Skills Projection

In this section we use the VEC's occupational employment projections for the Norfolk-Virginia Beach-Newport News MSA, in combination with occupational skills profiles developed by ACT,¹ to identify the skill sets that will be required to fill projected annual job openings within the region. The skills categories addressed in this analysis are Applied Mathematics, Applied Technology, Listening, Locating Information, Observation, Reading for Information, Teamwork, and Writing. A description of each category, the skills levels associated with it, and the proportion of projected annual job openings that fall within each skill Level follow.

Applied Mathematics

The **Applied Mathematics** assessment measures a person's skill in using mathematical reasoning to solve work-related problems. ACT defines the skills levels associated with this category as follows.

Level 3:

- Perform basic mathematical operations using whole numbers and decimals.
- Convert a number from one form into another using whole numbers, fractions, decimals, or percentages.
- Solve problems that are straightforward, involving a single type of mathematical operation.
- Translate easily from a verbal setup to a mathematical equation when all the information needed to solve the problem is provided in logical order and no unrelated information is included.

Level 4 (in addition to requirements for previous levels):

- Perform one or two mathematical operations using several positive or negative numbers.
- Add commonly known fractions, decimals, or percentages, or add three fractions that share a common denominator.
- Calculate averages, simple ratios, proportions, and rates, using whole numbers and decimals.

- Reorder verbal information before performing calculations.
- Determine which operations to perform and in what order.
- Read a simple chart or graph to obtain the information needed to solve a problem.

Level 5 (in addition to requirements for previous levels):

- Look up and calculate single-step conversions within English or non-English systems of measurement or between systems of measurement.
- Calculate using mixed units and several steps of logic.
- Calculate perimeters and areas of basic shapes.
- Calculate percentage discounts and markups.
- Determine what information, calculations, and unit conversions are needed to find a solution.

Level 6 (in addition to requirements for previous levels):

- Calculate using negative numbers, fractions, ratios, percentages, and mixed numbers.
- Calculate multiple rates for comparison or use in other calculations.
- Find basic areas and volumes of rectangular solids.
- Identify and correct errors in calculations.
- Solve problems involving considerable setup and multiple-step calculations or conversions.

Level 7 (in addition to requirements for previous levels):

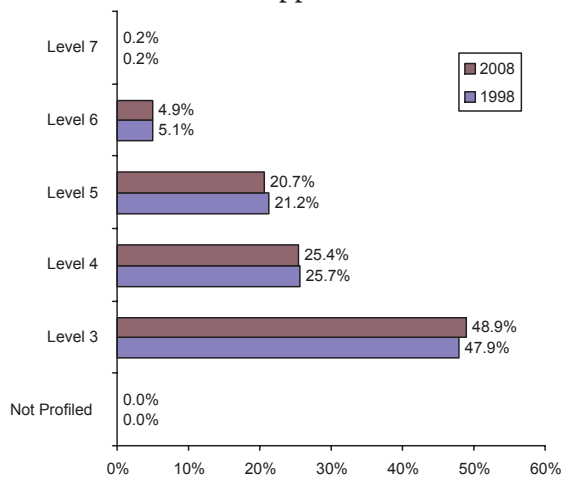
- Calculate using multiple steps of logic.
- Calculate multiple areas and the volumes of spheres, cylinders, and cones.
- Solve problems with more than one unknown.
- Solve problems involving nonlinear functions, such as rates of change.

¹ The occupational skills profiles used in this analysis were provided by ACT. ACT is an independent, non-profit organization that specializes in research and assessment related to education and work. These profiles are based on actual ACT *WorkKeys* assessments of thousands of employed individuals nationally. They represent the most comprehensive and current measure of the work skills required for specific occupations.

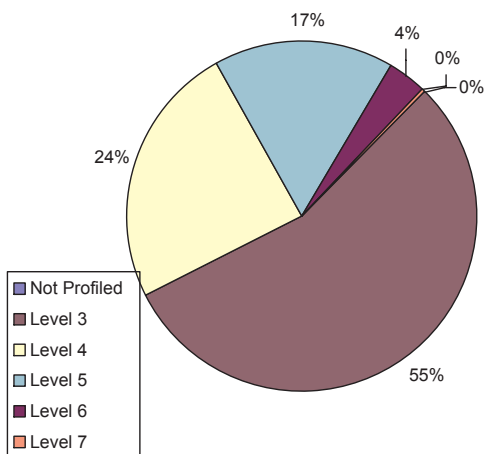


- Calculate by applying basic statistical concepts.
- Derive information needed to solve problems if incomplete or implicit information is presented.

The following figure details the percentage of overall jobs in the Norfolk-Virginia Beach-Newport News MSA in 1998 and 2008 by required **Applied Mathematics** skills Level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 3 Applied Mathematics skills.



Proportion of Jobs in the Norfolk-Virginia Beach-Newport News MSA by Required Skill Level – Applied Mathematics



Annual Openings in the Norfolk-Virginia Beach-Newport News MSA by Required Skill Level – Applied Mathematics

Applied Technology

The Applied Technology assessment measures a person's skill in using the basic principles of mechanics, electricity, fluid dynamics, and thermodynamics to solve problems with machines, equipment, and structures found in the workplace. ACT defines the skills levels associated with this category as follows.

Level 3:

- Understand the operation of basic hand tools, simple machine components, and uncomplicated systems, such as piping systems, simple electrical heaters, or other equipment found in the home, school, or workplace.
- Apply elementary principles underlying the operation of physical systems, such as the workings of plumbing components or simple electrical systems.

Level 4 (in addition to requirements for previous levels):

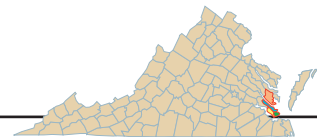
- Understand the operation of moderately complex tools, machines, and systems, such as appliances, pulley-driven equipment, or piping systems that carry more than one fluid.
- Apply elementary principles underlying the operation of physical systems, such as a block and tackle or cooling fins.

Level 5 (in addition to requirements for previous levels):

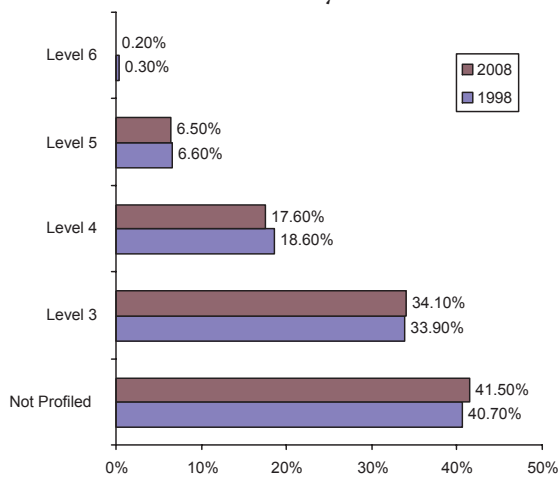
- Use the basic principles of mechanics, electricity, thermodynamics, and fluid dynamics in moderate and advanced applications.
- Understand complex machines and systems, such as the operation of gasoline engines, complex appliances, or an electrical system in a building.

Level 6 (in addition to requirements for previous levels):

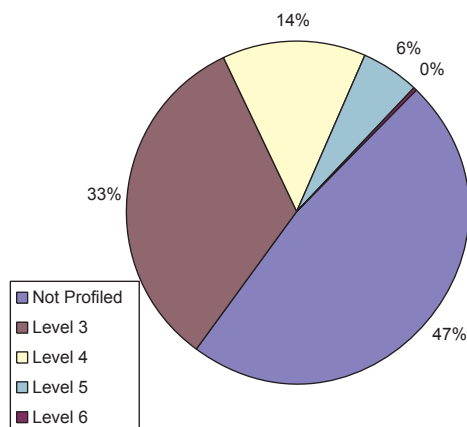
- Use principles of mechanics, electricity, thermodynamics, and fluid dynamics interacting in advanced applications such as air conditioning units.
- Troubleshoot complex systems in which a variety of mechanical, electrical, thermal, or flow faults are potential sources of difficult problems.



The following figure details the percentage of overall jobs in the Norfolk-Virginia Beach-Newport News MSA in 1998 and 2008 by required **Applied Technology** skills Level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 3 Applied Technology skills. The large “Not Profiled” proportion indicates that ACT has not profiled many of these occupations with respect to Applied Technology skills. As a result, it is not possible to include them in the analysis.



Proportion of Jobs in the Norfolk-Virginia Beach-Newport News MSA by Required Skill Level – Applied Technology



Annual Openings in the Norfolk-Virginia Beach-Newport News MSA by Required Skill Level – Applied Technology

Listening

The **Listening** portion of the Listening and Writing assessment measures a person’s skill in listening to and conveying information. ACT defines the skills levels

associated with this category as follows.

Level 1:

- Write down a small amount of useful information based on a spoken communication.
- Give clues to the gist of the situation or provide sources of further information, but do not include enough information to give the receiver a correct understanding of the situation described in the message.

Level 2 (in addition to requirements for previous levels):

- Correctly write down the basic ideas of a spoken message.
- Give a fair amount of useful information, but may miss some of the important details or incorrectly record some of the information.

Level 3 (in addition to requirements for previous levels):

- Listen to a spoken communication and record messages that are basically correct.
- Present all the primary details and the relationships among them correctly, but may miss one or two pieces of important information.

Level 4 (in addition to requirements for previous levels):

- Accurately convey the central idea of a spoken communication.
- Correctly record all the important information and the relationships among pieces of information, but may miss or incorrectly record some details or include irrelevant information.

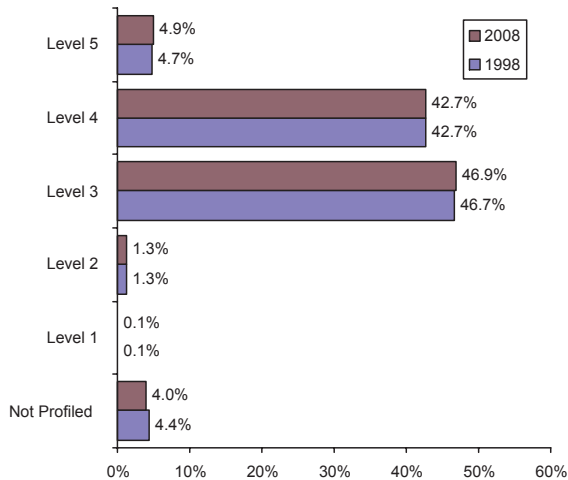
Level 5 (in addition to requirements for previous levels):

- Correctly record all the important information and the relationships among pieces of information from a spoken communication.
- Use supporting details to convey insight into the particular situation the message involves.

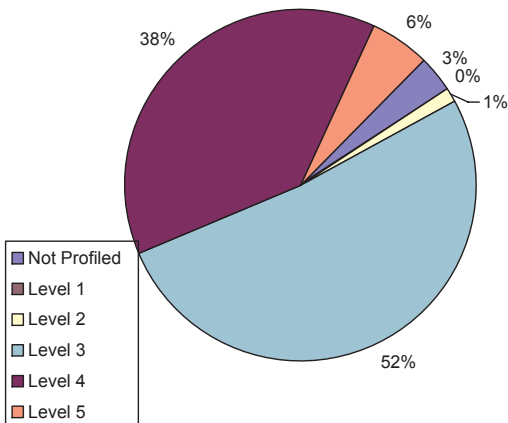
The following figure details the percentage of overall jobs in the Norfolk-Virginia Beach-Newport News MSA in 1998 and 2008 by required **Listening** skills Level, as



determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 3 and Level 4 **Listening** skills.



Proportion of Jobs in the Norfolk-Virginia Beach-Newport News MSA by Required Skill Level – Listening



Annual Openings in the Norfolk-Virginia Beach-Newport News MSA by Required Skill Level – Listening

Locating Information

The **Locating Information** assessment measures a person's skill in using workplace graphics such as diagrams, floor plans, tables, charts, graphs, forms, and instrument gauges. ACT defines the skills levels associated with this category as follows.

Level 3:

- Find one or two pieces of information in a graphic.

- Fill in one or two pieces of information that are missing from a graphic.

Level 4 (in addition to requirements for previous levels):

- Find several pieces of information in graphics.
- Summarize and/or compare information and trends in a single graphic.
- Summarize and/or compare information and trends among more than one graphic by determining the relationships among the graphics.

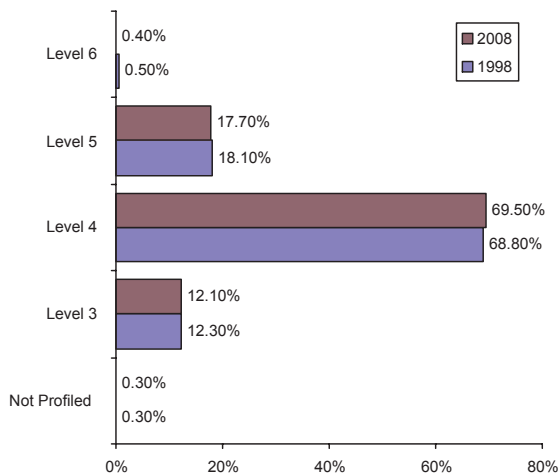
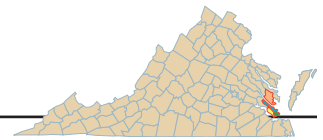
Level 5 (in addition to requirements for previous levels):

- Summarize and/or compare information and trends in a single graphic.
- Sort through distracting information to summarize and/or compare information and trends presented in more than one workplace graphic.

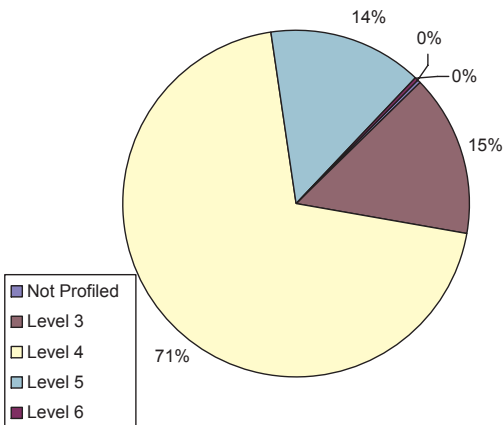
Level 6 (in addition to requirements for previous levels):

- Draw conclusions from the information presented in very detailed graphics.
- Apply information from these types of graphics to specific situations.
- Analyze data within these types of graphics to make decisions and/or predictions requiring judgments based on the information presented.

The following figure details the percentage of overall jobs in the Norfolk-Virginia Beach-Newport News MSA in 1998 and 2008 by required **Locating Information** skills Level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 4 **Locating Information** skills.



Proportion of Jobs in the Norfolk-Virginia Beach-Newport News MSA by Required Skill Level – Locating Information



Annual Openings in the Norfolk-Virginia Beach-Newport News MSA by Required Skill Level – Locating Information

Observation

The **Observation** assessment measures a person's skill at noticing details and paying attention to instructions and demonstrations. The following is a description of the skills levels associated with this area.

Level 3:

- Pay attention.
- Watch and listen to a strongly cued demonstration or set of instructions.
- Recall a few strongly reinforced details of a process or procedure.

Level 4:

- Sustain focused attention on the demonstrated instructions, process, or procedures.
- Select and attend to important details.
- Recall a few important, moderately reinforced details about the demonstrated process or procedure.

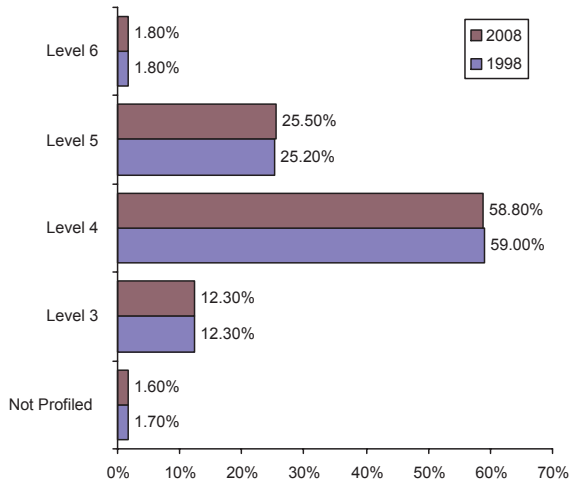
Level 5:

- Focus attention on and recall several important aspects of the information presented.
- Ignore irrelevant background information through selective attention to important details.
- Maintain attention to detail.
- Recall several important details about unfamiliar material.

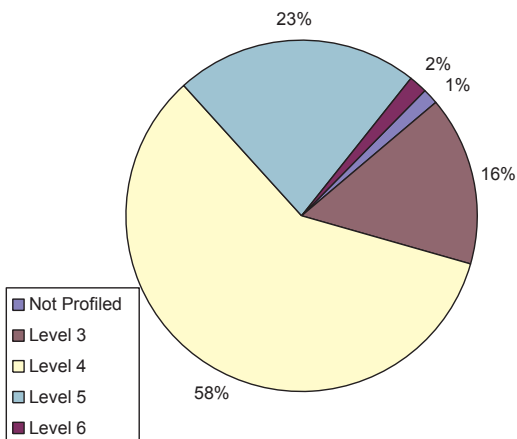
Level 6:

- Notice and remember several details that are relevant to the process or procedure being shown.
- Take in and recall incoming sensory information so it can be used to make predictions, comparisons, or evaluations.
- Visualize how a detail or task fits into the entire process or procedure demonstrated.
- Interpret if-then and cause-effect relationships.

The following figure details the percentage of overall jobs in the Norfolk-Virginia Beach-Newport News MSA in 1998 and 2008 by required **Observation** skills Level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 4 **Observation** skills.



Proportion of Jobs in the Norfolk-Virginia Beach-Newport News MSA by Required Skill Level – Observation



Annual Openings in the Norfolk-Virginia Beach-Newport News MSA by Required Skill Level – Observation

Reading for Information

The **Reading for Information** assessment measures a person's skill in reading and using work-related information including instructions, policies, memos, bulletins, notices, letters, manuals, and governmental regulations. ACT defines the skills levels associated with this category as follows.

Level 3:

- Identify uncomplicated key concepts and simple details.
- Recognize the proper placement of a step in a sequence of events, or the proper time to perform a task.

- Identify the meaning of a word that is defined within the document.
- Identify the meaning of a simple word that is not defined within the document.
- Recognize the application of instructions given in the document to situations that are also described in the document.

Level 4:

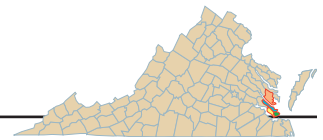
- Identify important details that are less obvious than those in Level 3.
- Recognize the application of more complex instructions, some of which involve several steps, to described situations.
- Recognize cause-effect relationships.
- Determine the meaning of words that are not defined in the document.

Level 5:

- Identify the paraphrased definition of a technical term or jargon that is defined in the document.
- Recognize the application of technical terms or jargon to stated situations.
- Recognize the definition of an acronym that is defined in the document.
- Identify the appropriate definition of a word with multiple meanings.
- Recognize the application of instructions from the document to new situations that are similar to those described in the document.
- Recognize the application of more complex instructions to described situations, including conditionals and procedures with multiple steps.

Level 6:

- Recognize the application of jargon or technical terms to new situations.
- Recognize the application of complex instructions to new situations.
- Recognize, from context, the less common meaning of a word with multiple meanings.
- Generalize from the document situations not described in the document.

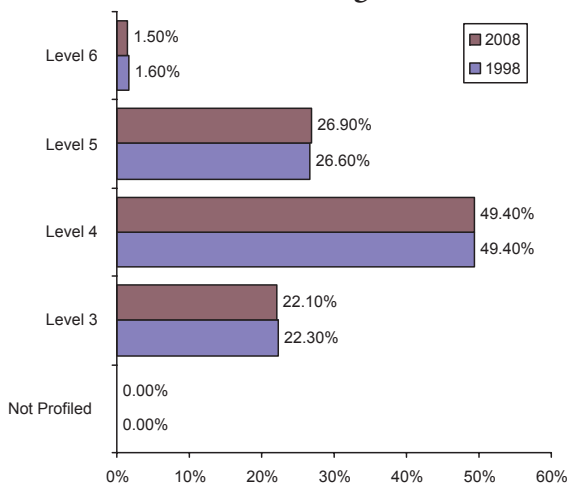


- Identify implied details.
- Explain the rationale behind a procedure, policy, or communication.
- Generalize from the document to a somewhat similar situation.

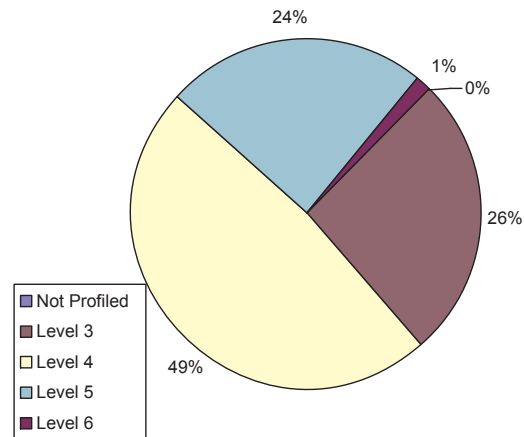
Level 7:

- Recognize the definitions of difficult, uncommon jargon or technical terms, based on the context of the reading materials.
- Figure out the general principles underlying described situations and apply them to situations neither described in nor completely similar to those in the document.

The following figure details the percentage of overall jobs in the Norfolk-Virginia Beach-Newport News MSA in 1998 and 2008 by required **Reading for Information** skills Level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 4 **Reading for Information** skills.



Proportion of Jobs in the Norfolk-Virginia Beach-Newport News MSA by Required Skill Level – Reading for Information



Annual Openings in the Norfolk-Virginia Beach-Newport News MSA by Required Skill Level – Reading for Information

Teamwork

The **Teamwork** assessment measures a person's skill in choosing behaviors and/or actions that simultaneously support relationships within a team and lead toward the accomplishment of work tasks. The following is a description of the skills levels associated with this area.

Level 3:

- Identify team goals and ways to work with other team members to accomplish team goals.
- Recognize that a team is having problems finishing a task and identify the cause of those problems.
- Choose actions that actively support the ideas other team members have for accomplishing team goals.
- Recognize the need for trust and dependability in a team environment.

Level 4:

- Identify the organization of tasks and the time schedule that would help the team reach goals efficiently, creatively, and effectively.
- Select approaches that accept direction from other team members in order to complete tasks and to build and keep up good team relations.
- Identify behaviors that show appreciation for the personal and professional qualities of other team members and respect for their diversity.



- Recognize the need for commitment to quality and sensitivity to customers while pursuing the team goal.

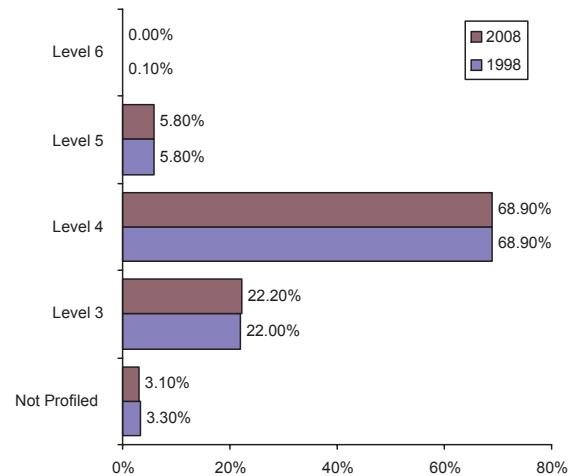
Level 5:

- Identify courses of action that give direction to other team members.
- Determine the best use of team talents to accomplish goals.
- Choose approaches that encourage other team members to improve relationships and/or complete tasks.
- Consider and evaluate the possible effects of alternative behaviors on both team relationships and the completion of tasks.

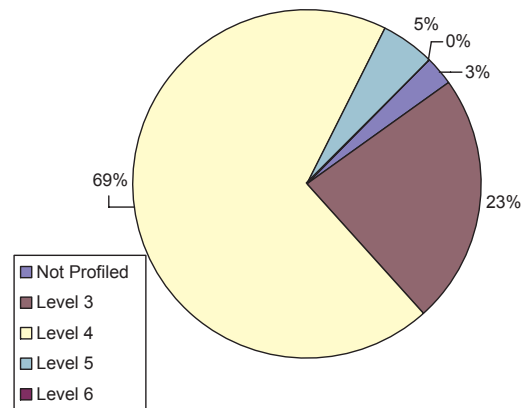
Level 6:

- Identify the focus of team activity and select a new focus if that would help the team meet its goals more effectively.
- Select approaches that show a willingness to give and take direction, as needed, to further team goals (e.g., recognize the organization of team members' tasks that would best serve the larger goals of the team).
- Choose approaches that encourage a team to act as a unit and reach agreement when discussing specific issues.
- Identify actions that would help manage differences of opinion between team members, moving the team toward its goals while valuing and supporting individual diversity.

The following figure details the percentage of overall jobs in the Norfolk-Virginia Beach-Newport News MSA in 1998 and 2008 by required **Teamwork** skills Level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 4 **Teamwork** skills.



Proportion of Jobs in the Norfolk-Virginia Beach-Newport News MSA by Required Skill Level – Teamwork



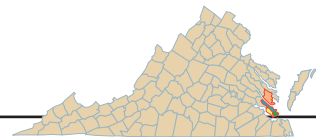
Annual Openings in the Norfolk-Virginia Beach-Newport News MSA by Required Skill Level – Teamwork

Writing

The **Writing** portion of the Listening and Writing assessment measures a person's skill in writing work-related messages. ACT defines the skills levels associated with this category as follows.

Level 1:

- Write messages in English that contain a large number of major grammatical, punctuation, spelling, and/or other mechanical errors making the messages very unclear and inconsistent with standard business English.



Level 2:

- Write messages that are generally understandable, but contain many errors in grammar, punctuation, and/or sentence structure making these messages somewhat difficult to comprehend.

Level 3:

- Write messages that are clear, but may include some incomplete sentences and/or errors in grammar and punctuation.

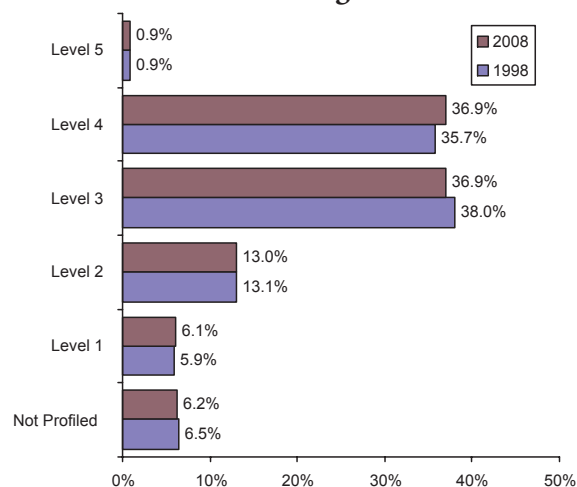
Level 4:

- Write messages that are clear and generally consistent with standard business English, but may contain a few minor errors in grammar and punctuation, and/or the writing style may lack clear organization and appropriate transitions.

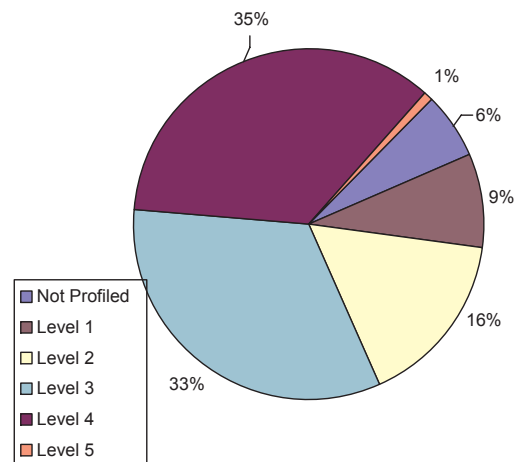
Level 5:

- Write messages that are clear and highly consistent with standard business English.
- Use good sentence structure with a smooth, logical style and no mechanical errors.

The following figure details the percentage of overall jobs in the Norfolk-Virginia Beach-Newport News MSA in 1998 and 2008 by required **Writing** skills Level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 3 and Level 4 **Writing** skills.



port News MSA by Required Skill Level – Writing



Annual Openings in the Norfolk-Virginia Beach-Newport News MSA by Required Skill Level – Writing



Graduate Data

As a compliment to the prior two sections which detailed the likely demand for skilled workers in the region, this section provides data on the current supply

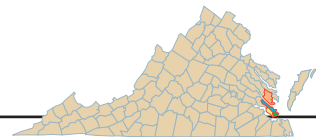
of graduates within WIA XIV. These data reflect number of graduates, by institution, and by academic program for the 2002-2003 academic year.¹

Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
Christopher Newport Univ	Environmental Science/Studies (03.0102)	0	0	0	0	0	4	0
Christopher Newport Univ	Information Sciences and Systems (11.0401)	0	0	0	37	0	0	0
Christopher Newport Univ	Computer Science (11.0701)	0	0	0	24	0	0	0
Christopher Newport Univ	General Teacher Education, Other (13.1299)	0	0	0	0	0	22	0
Christopher Newport Univ	Computer Engineering (14.0901)	0	0	0	6	0	0	0
Christopher Newport Univ	Foreign Languages and Literatures, General (16.0101)	0	0	0	10	0	0	0
Christopher Newport Univ	English Language and Literature, General (23.0101)	0	0	0	76	0	0	0
Christopher Newport Univ	Biology, General (26.0101)	0	0	0	52	0	0	0
Christopher Newport Univ	Mathematics (27.0101)	0	0	0	7	0	0	0
Christopher Newport Univ	Multi/Interdisciplinary Studies, Other (30.9999)	0	0	0	4	0	0	0
Christopher Newport Univ	Parks, Recreation and Leisure Studies (31.0101)	0	0	0	49	0	0	0
Christopher Newport Univ	Philosophy (38.0101)	0	0	0	11	0	0	0
Christopher Newport Univ	Physics, Other (40.0899)	0	0	0	0	0	8	0
Christopher Newport Univ	Psychology, General (42.0101)	0	0	0	89	0	0	0
Christopher Newport Univ	Psychology, Other (42.9999)	0	0	0	0	0	5	0
Christopher Newport Univ	Public Administration (44.0401)	0	0	0	76	0	0	0
Christopher Newport Univ	Public Administration and Services, Other (44.9999)	0	0	0	0	0	2	0
Christopher Newport Univ	History, General (45.0801)	0	0	0	46	0	0	0
Christopher Newport Univ	Political Science, General (45.1001)	0	0	0	18	0	0	0
Christopher Newport Univ	Sociology (45.1101)	0	0	0	50	0	0	0
Christopher Newport Univ	Visual and Performing Arts (50.0101)	0	0	0	24	0	0	0
Christopher Newport Univ	Nursing (R.N. Training) (51.1601)	0	0	0	26	0	1	0

¹ Source: State Council of Higher Education for Virginia, Research Report C1, Completion Summary. Where data for 2002-2003 were not available, 2001-2002 data have been used.

Education Profile

WIA XIV



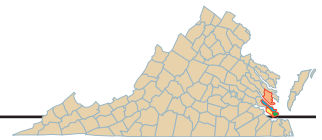
Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
Christopher Newport Univ	Business Administration and Management, General (52.0201)	0	0	0	121	0	0	0
Christopher Newport Univ	Accounting (52.0301)	0	0	0	17	0	0	0
Christopher Newport Univ	Business/Managerial Economics (52.0601)	0	0	0	1	0	0	0
College of William and Mary	American Studies/Civilization (05.0102)	0	0	0	8	0	8	3
College of William and Mary	Area Studies, Other (05.0199)	0	0	0	23	0	0	0
College of William and Mary	Computer and Information Sciences, General (11.0101)	0	0	0	41	0	19	5
College of William and Mary	Curriculum and Instruction (13.0301)	0	0	0	0	0	45	0
College of William and Mary	Education Administration and Supervision, General (13.0401)	0	0	0	0	0	24	0
College of William and Mary	Education Administration and Supervision, Other (13.0499)	0	0	0	0	0	0	21
College of William and Mary	Educational Psychology (13.0802)	0	0	0	0	0	15	0
College of William and Mary	Counselor Education Counseling and Guidance Services (13.1101)	0	0	0	0	0	19	4
College of William and Mary	Spanish Language and Literature (16.0905)	0	0	0	15	0	0	0
College of William and Mary	Classics and Classical Languages and Literatures (16.1201)	0	0	0	5	0	0	0
College of William and Mary	German Language and Literature (16.0501)	0	0	0	4	0	0	0
College of William and Mary	French Language and Literature (16.0901)	0	0	0	6	0	0	0
College of William and Mary	Law (LL.B., J.D.) (22.0101)	0	0	0	0	168	0	0
College of William and Mary	Law and Legal Studies, Other (22.0199)	0	0	0	0	0	8	0
College of William and Mary	English Language and Literature, General (23.0101)	0	0	0	96	0	2	0
College of William and Mary	Biology, General (26.0101)	0	0	0	115	0	5	0
College of William and Mary	Marine/Aquatic Biology (26.0607)	0	0	0	0	0	15	11
College of William and Mary	Mathematics (27.0101)	0	0	0	24	0	0	0
College of William and Mary	Biological and Physical Sciences (30.0101)	0	0	0	0	0	6	4
College of William and Mary	Multi/Interdisciplinary Studies, Other (30.9999)	0	0	0	71	0	0	0



Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
College of William and Mary	Health and Physical Education, General (31.0501)	0	0	0	34	0	0	0
College of William and Mary	Philosophy (38.0101)	0	0	0	24	0	0	0
College of William and Mary	Religion/Religious Studies (38.0201)	0	0	0	26	0	0	0
College of William and Mary	Chemistry, General (40.0501)	0	0	0	42	0	2	0
College of William and Mary	Geology (40.0601)	0	0	0	18	0	0	0
College of William and Mary	Physics, General (40.0801)	0	0	0	16	0	11	4
College of William and Mary	Psychology, General (42.0101)	0	0	0	125	0	7	0
College of William and Mary	Clinical Psychology (42.0201)	0	0	0	0	0	0	3
College of William and Mary	Public Policy Analysis (44.0501)	0	0	0	19	0	17	0
College of William and Mary	History, General (45.0801)	0	0	0	95	0	15	4
College of William and Mary	Economics, General (45.0601)	0	0	0	87	0	0	0
College of William and Mary	Anthropology (45.0201)	0	0	0	20	0	11	0
College of William and Mary	Sociology (45.1101)	0	0	0	37	0	0	0
College of William and Mary	Political Science, General (45.1001)	0	0	0	123	0	0	0
College of William and Mary	International Relations and Affairs (45.0901)	0	0	0	45	0	0	0
College of William and Mary	Drama/Theater Arts, General (50.0501)	0	0	0	13	0	0	0
College of William and Mary	Art, General (50.0701)	0	0	0	18	0	0	0
College of William and Mary	Music, General (50.0901)	0	0	0	8	0	0	0
College of William and Mary	Accounting (52.0301)	0	0	0	0	0	30	0
College of William and Mary	Business Administration and Management, General (52.0201)	0	0	0	196	0	150	0
Hampton Univ	Architecture (04.0201)	0	0	0	12	0	0	0
Hampton Univ	Entrepreneurship (08.0301)	0	0	0	3	0	0	0
Hampton Univ	Radio and Television Broadcasting (09.0701)	0	0	0	7	0	0	0
Hampton Univ	Journalism (09.0401)	0	0	0	4	0	0	0
Hampton Univ	Broadcast Journalism (09.0402)	0	0	0	28	0	0	0
Hampton Univ	Journalism and Mass Communication, Other (09.0499)	0	0	0	6	0	0	0
Hampton Univ	Information Sciences and Systems (11.0401)	0	0	0	21	0	0	0
Hampton Univ	Computer and Information Sciences, General (11.0101)	0	0	0	18	0	5	0

Education Profile

WIA XIV



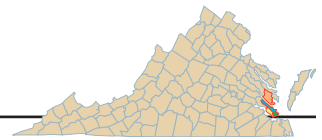
Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
Hampton Univ	Music Teacher Education (13.1312)	0	0	0	0	0	4	0
Hampton Univ	Physical Education Teaching and Coaching (13.1314)	0	0	0	5	0	0	0
Hampton Univ	Counselor Education Counseling and Guidance Services (13.1101)	0	0	0	0	0	6	0
Hampton Univ	Education of the Specific Learning Disabled (13.1011)	0	0	0	0	0	5	0
Hampton Univ	Elementary Teacher Education (13.1202)	0	0	0	0	0	27	0
Hampton Univ	Chemical Engineering (14.0701)	0	0	0	4	0	0	0
Hampton Univ	Engineering, General (14.0101)	0	0	0	20	0	0	0
Hampton Univ	Paralegal/Legal Assistant (22.0103)	0	0	0	9	0	0	0
Hampton Univ	English Language and Literature/ Letters, Other (23.9999)	0	0	0	26	0	0	0
Hampton Univ	Speech and Rhetorical Studies (23.1001)	0	0	0	2	0	0	0
Hampton Univ	General Studies (24.0102)	0	0	0	19	0	0	0
Hampton Univ	Biology, General (26.0101)	0	0	0	76	0	7	0
Hampton Univ	Marine/Aquatic Biology (26.0607)	0	0	0	7	0	0	0
Hampton Univ	Mathematics (27.0101)	0	0	0	10	0	0	0
Hampton Univ	Applied Mathematics, General (27.0301)	0	0	0	0	0	3	0
Hampton Univ	Parks, Recreation, Leisure and Fitness Studies, Other (31.9999)	0	0	0	26	0	0	0
Hampton Univ	Chemistry, General (40.0501)	0	0	0	4	0	1	0
Hampton Univ	Physics, General (40.0801)	0	0	0	4	0	1	3
Hampton Univ	Psychology, General (42.0101)	0	0	0	96	0	0	0
Hampton Univ	Fire Protection, Other (43.0299)	0	0	0	4	0	0	0
Hampton Univ	Social Work (44.0701)	0	0	0	34	0	0	0
Hampton Univ	Economics, General (45.0601)	0	0	0	3	0	0	0
Hampton Univ	History, General (45.0801)	0	0	0	14	0	0	0
Hampton Univ	Political Science, General (45.1001)	0	0	0	57	0	0	0
Hampton Univ	Aviation Systems and Avionics Main. Technologist/Technician (47.0609)	0	0	4	0	0	0	0
Hampton Univ	Aircraft Pilot and Navigator (Professional) (49.0102)	0	0	0	1	0	0	0
Hampton Univ	Aviation Management (49.0104)	0	0	0	3	0	0	0



Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
Hampton Univ	Music, General (50.0901)	0	0	0	6	0	0	0
Hampton Univ	Art, General (50.0701)	0	0	0	13	0	0	0
Hampton Univ	Music, Other (50.0999)	0	0	0	4	0	0	0
Hampton Univ	Health and Medical Diagnostic and Treatment Services, Other (51.0999)	0	0	0	3	0	0	0
Hampton Univ	Nursing (R.N. Training) (51.1601)	0	0	0	65	0	24	1
Hampton Univ	Physical Therapy (51.2308)	0	0	0	0	0	0	6
Hampton Univ	Pharmacy (B. Pharm., Pharm.D.) (51.2001)	0	0	0	0	19	0	0
Hampton Univ	Health Professions and Related Sciences, Other (51.9999)	0	0	0	0	0	4	0
Hampton Univ	Speech-Language Pathology (51.0203)	0	0	0	6	0	11	0
Hampton Univ	Management Information Systems and Business Data Processing, General (52.1201)	0	0	0	6	0	0	0
Hampton Univ	Business Marketing and Marketing Management (52.1401)	0	0	0	36	0	0	0
Hampton Univ	Business Administration and Management, General (52.0201)	0	0	0	132	0	0	0
Hampton Univ	Accounting (52.0301)	0	0	0	26	0	0	0
Hampton Univ	Business Administration and Management, Other (52.0299)	0	0	0	0	0	14	0
Hampton Univ	Finance, General (52.0801)	0	0	0	31	0	0	0
Thomas Nelson CC	Special Education, Other (13.1099)	0	6	12	0	0	0	0
Thomas Nelson CC	Engineering, General (14.0101)	0	0	7	0	0	0	0
Thomas Nelson CC	Electrical and Electronic Engin.- Related Technol./Technicians, Other (15.0399)	0	0	7	0	0	0	0
Thomas Nelson CC	Mechanical Engineering-Related Technol./Technicians, Other (15.0899)	0	2	27	0	0	0	0
Thomas Nelson CC	Industrial Production Technol./Tech- nicians, Other (15.0699)	0	5	0	0	0	0	0
Thomas Nelson CC	Environmental Control Technol./ Technicians, Other (15.0599)	0	11	0	0	0	0	0
Thomas Nelson CC	Liberal Arts and Sciences/Liberal Studies (24.0101)	0	0	22	0	0	0	0
Thomas Nelson CC	General Studies (24.0102)	0	0	4	0	0	0	0

Education Profile

WIA XIV

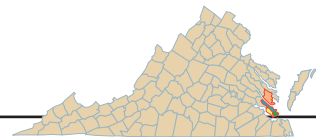


Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
Thomas Nelson CC	Biological and Physical Sciences (30.0101)	0	0	53	0	0	0	0
Thomas Nelson CC	Protective Services, Other (43.9999)	0	0	19	0	0	0	0
Thomas Nelson CC	Public Administration and Services, Other (44.9999)	0	0	23	0	0	0	0
Thomas Nelson CC	Social Sciences, General (45.0101)	0	0	86	0	0	0	0
Thomas Nelson CC	Vehicle and Mobile Equipment Mechanics and Repairers, Other (47.0699)	0	3	5	0	0	0	0
Thomas Nelson CC	Graphic and Printing Equipment Operator, General (48.0201)	0	2	19	0	0	0	0
Thomas Nelson CC	Visual and Performing Arts, Other (50.9999)	0	0	11	0	0	0	0
Thomas Nelson CC	Mental Health Services, Other (51.1599)	86	0	0	0	0	0	0
Thomas Nelson CC	Medical Laboratory Technician (51.1004)	0	61	14	0	0	0	0
Thomas Nelson CC	Nursing (R.N. Training) (51.1601)	0	0	44	0	0	0	0
Thomas Nelson CC	Administrative Assistant/Secretarial Science, General (52.0401)	0	7	14	0	0	0	0
Thomas Nelson CC	Business Administration and Management, General (52.0201)	0	0	75	0	0	0	0
Thomas Nelson CC	Management Information Systems and Business Data Processing, General (52.1201)	0	0	49	0	0	0	0
Thomas Nelson CC	Business, General (52.0101)	0	0	25	0	0	0	0



WIA XIV Training Providers List

Provider Name	Contact Information	List of Programs/Courses
Chesapeake Marine Training Institute Inc	3566 George Washington Memorial Hwy Suite 3 Hayes VA 23072 Phone: 804-642-0123 Web: www.chesapeakemarineinst.com	Captain's License
Clipper Technologies Inc/ ENTRE Information Services	11844 Rock Landing Dr #E Newport News VA 23606 Phone: 757-599-5866 Email: tlusk@entre-nn.com Web: www.entre-nn.com	A+ Certification MCSE - Microsoft Certified Systems Engineer Microsoft Certified Professional (MCP)
Dominion School of Hair Design	7117 Crewe Rd Hayes VA 23183 Phone: 804-684-0800 Email: hmurray@inna.net	Cosmetology
ECPI College of Technology	1919 Commerce Drive Hampton VA 23666 Phone: 757-838-9191 Web: www.ecpi.edu	Computer Training
Electronic Systems Inc.	11838 Rock Landing Drive Suite 150 Newport News VA 23606 Phone: 757-873-1045 Email: monicab@mail.esi.net Web: www.esi.net/	A + Certification Certified Internet Webmaster (CIW) Designer Microsoft Certified Professional Microsoft Office User Specialist Network + Certification
Hampton University College of Continuing Education	P.O.Box 6162 Hampton VA 23668 Phone: 757-727-5773 Email: willielawton@hamptonu.edu Web: www.hamptonu.edu	Airframe and Powerplant Mechanics Licensure General Studies Hotel Restaurant Management Certificate Paralegal Studies Certificate
Kee Business College	803 Diligence Drive Newport News VA 23606 Phone: 757-873-1111 Web: www.cci.edu	Computerized Office Applications Medical Administrative Assistant Medical Assisting Medical Insurance Billing and Coding Microsoft Office User Specialist
Medical Careers Institute	1001 Omni Blvd. Suite 200 Newport News VA 23606 Phone: 757-873-2423 Email: legatz@medicalcareersinstitute.com	Dental Assistant Medical Assistant Medical Office Specialist Medical Transcriptionist
Mt Support Services Inc	110 Coliseum Crossing #152 Hampton VA 23666 Phone: 757-838-0723 Email: mtsupp@yahoo.com Web: www.mtsupport.com	Electronic Claims Processing Medical Transcription



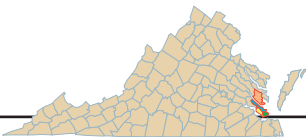
WIA XIV Training Providers List (continued)

Provider Name	Contact Information	List of Programs/Courses
New Horizons Regional Education Center	520 Butler Farm Road Hampton VA 23666 Phone: 757-766-1101 Email: ncarr@nhgs.tec.va.us Web: gauss.nhgs.tec.va.us	Adult Continuing and Apprenticeship Education
Newport News Public Schools Adult Continuing Education	51 Copeland Lane Newport News VA 23601 Phone: 757-591-4730 Email: gthomas@warwick.nn.k12.va.us	Computers External Diploma GED Preparation
PC Tech Learning Center	2021-B Cunningham Drive Suite 2 Hampton VA 23666 Phone: 757-827-7787 Email: aa@pctechlearningcenter.com Web: www.pctechlearningcenter.com	A + Cisco Certified Network Associate (CCNA) Microsoft Certified System Engineer (MCSE) N +
Rappahannock Community College	12745 College Drive Glenns VA 23149 Phone: 804-758-6751 Email: rugherro@rcc.cc.va.us Web: www.rcc.cc.va.us	College Courses
Riverside Regional Convalescent Center	1000 Old Denbigh Boulevard Newport News VA 23602 Phone: 757-693-6503	Certified Nurses Aide
Riverside School of Health Occupations	12420 Warwick Boulevard Suite 6G Newport News VA 23606 Phone: 757-594-2721 Email: jean.raines@rivhs.com Web: www.riversideonline.com	Medical Assistant Nurse Aide Paramedic Phlebotomy Practical Nursing Radiologic Technology Renal Dialysis Secretary Private Hospital
Tender Care Home Care Inc	3112 Chesnut Avenue Newport News VA 23607 Phone: 757-247-7680 Email: pmainor@hroads.net Web: www.tendercarehealthservices.com	Nurses Aide
Thomas Nelson Community College	99 Thomas Nelson Drive Hampton VA 23670-0407 Phone: 757-825-2711 Email: clarkel@tncc.cc.va.us Web: www.tncc.cc.va	Automotive Technology College Courses Computer Training
Tidewater Tech - Peninsula	616 Denbigh Blvd Newport News VA 23608 Phone: 757-874-2121 Email: directorttp@tidetech.com Web: www.tidetech.com	Computer Administrative Specialist Computer Electronic Technician Computer Network Administrator Computer Support Specialist Medical Assistant



WIA XIV Training Providers List (continued)

Provider Name	Contact Information	List of Programs/Courses
Virginia Academy of Massage Therapy	5314 George Washington Memorial Hig Yorktown VA 23692 Phone: 757-872-0934 Email: info@virginiaacademy.com	Massage Therapy
Virginia Health Services Inc	540 Aberthaw Ave Newport News VA 23601 Phone: 757-595-2273	Certified Nurses Aide
Virginia North Carolina Laborers Training	4191 Rochambeau Drive Williamsburg VA 23188 Phone: 757-566-3015	Asbestos Abatement Worker Mason Tending
Virginia School of Hair Design	101 West Queens Way Hampton VA 23669 Phone: 757-722-0211 Email: vshd@tez.net	Cosmetology Cosmetology Instructor Nail Tech
York County Schools Adult Education	302 Dare Road Yorktown VA 23692 Phone: 757-890-0771 Email: rwilson@ycsd.york.va.usa	Adult Basic Education and GED English as a Second Language



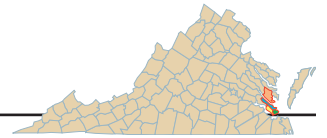


V. Summary and Conclusions

Population trends in WIA XIV, as in other parts of the United States, are currently dominated by the aging of the baby-boom generation. Between 2000 and 2010 this demographic phenomena will cause a major increase in the 55 and over population within the region. The net result of this increase will be a significant “graying” of the overall population.

One implication of this is that younger entry-level workers will be in short supply. This should elevate the importance of workforce services in facilitating the efficient and effective use of existing labor resources by getting younger trained workers into the workforce, and retraining or upgrading the skills of older displaced workers.

Another significant trend within WIA XIV has to do with declining employment in Government and Manufacturing, coupled with increasing employment in Services (especially technology, health care, and education) and Retail Trade. It can be anticipated that employment increases in the Service sector – specifically, health care and education – will drive much of the demand for trained workers between 1998 and 2008.



Average Weekly Wage

Gloucester County

INDUSTRY SECTOR	2002 (\$)
****TOTAL****	431
AGRICULTURE	354
MINING	D
UTILITIES	D
CONSTRUCTION	468
MANUFACTURING	500
TRADE-WHOLESALE	436
TRADE-RETAIL	349
TRANSPORTATION	397
INFORMATION	500
FINANCE/INSURNC	570
REAL ESTATE	323
PROF/TECH SERV	601
MANAGMNT OF COS	D
ADMIN/WASTE SER	329
EDUCATIONAL SER	351
HEALTH CARE	498
ARTS/ENTER/REC	237
ACCOMMDATN/FOOD	176
OTHER SERVICES	307
GOVT TOTAL	544
GOVT FEDERAL	703
GOVT STATE	602
GOVT LOCAL	503
UNCLASSIFIED	0

James City County

INDUSTRY SECTOR	2002 (\$)
****TOTAL****	506
AGRICULTURE	256
MINING	D
UTILITIES	D
CONSTRUCTION	662
MANUFACTURING	992
TRADE-WHOLESALE	678
TRADE-RETAIL	346
TRANSPORTATION	497
INFORMATION	707
FINANCE/INSURNC	886
REAL ESTATE	456
PROF/TECH SERV	703
MANAGMNT OF COS	828
ADMIN/WASTE SER	340
EDUCATIONAL SER	408
HEALTH CARE	466
ARTS/ENTER/REC	D
ACCOMMDATN/FOOD	322
OTHER SERVICES	376
GOVT TOTAL	558
GOVT FEDERAL	705
GOVT STATE	569
GOVT LOCAL	549
UNCLASSIFIED	0

"D" indicates nondisclosed data.

Source: Covered Employment and Wage data, Annualized 2002.



Average Weekly Wage

York County

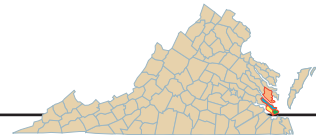
INDUSTRY SECTOR	2002 (\$)
****TOTAL****	508
AGRICULTURE	356
MINING	D
UTILITIES	D
CONSTRUCTION	617
MANUFACTURING	995
TRADE-WHOLESALE	690
TRADE-RETAIL	333
TRANSPORTATION	570
INFORMATION	634
FINANCE/INSURNC	629
REAL ESTATE	566
PROF/TECH SERV	620
MANAGMNT OF COS	D
ADMIN/WASTE SER	404
EDUCATIONAL SER	403
HEALTH CARE	397
ARTS/ENTER/REC	249
ACCOMMDATN/FOOD	215
OTHER SERVICES	370
GOVT TOTAL	697
GOVT FEDERAL	983
GOVT STATE	558
GOVT LOCAL	615
UNCLASSIFIED	0

Hampton City

INDUSTRY SECTOR	2002 (\$)
****TOTAL****	630
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	568
MANUFACTURING	721
TRADE-WHOLESALE	805
TRADE-RETAIL	369
TRANSPORTATION	439
INFORMATION	541
FINANCE/INSURNC	642
REAL ESTATE	437
PROF/TECH SERV	1,161
MANAGMNT OF COS	730
ADMIN/WASTE SER	280
EDUCATIONAL SER	668
HEALTH CARE	651
ARTS/ENTER/REC	240
ACCOMMDATN/FOOD	208
OTHER SERVICES	415
GOVT TOTAL	810
GOVT FEDERAL	1,110
GOVT STATE	505
GOVT LOCAL	543
UNCLASSIFIED	0

"D" indicates nondisclosed data.

Source: Covered Employment and Wage data, Annualized 2002.



Average Weekly Wage

Newport News city

INDUSTRY SECTOR	2002 (\$)
****TOTAL****	635
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	629
MANUFACTURING	870
TRADE-WHOLESALE	850
TRADE-RETAIL	393
TRANSPORTATION	511
INFORMATION	570
FINANCE/INSURNC	814
REAL ESTATE	484
PROF/TECH SERV	887
MANAGMNT OF COS	D
ADMIN/WASTE SER	385
EDUCATIONAL SER	404
HEALTH CARE	622
ARTS/ENTER/REC	283
ACCOMMDATN/FOOD	213
OTHER SERVICES	360
GOVT TOTAL	674
GOVT FEDERAL	839
GOVT STATE	650
GOVT LOCAL	595
UNCLASSIFIED	0

Poquoson city

INDUSTRY SECTOR	2002 (\$)
****TOTAL****	429
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	526
MANUFACTURING	500
TRADE-WHOLESALE	D
TRADE-RETAIL	387
TRANSPORTATION	D
INFORMATION	D
FINANCE/INSURNC	D
REAL ESTATE	632
PROF/TECH SERV	381
MANAGMNT OF COS	D
ADMIN/WASTE SER	300
EDUCATIONAL SER	175
HEALTH CARE	440
ARTS/ENTER/REC	D
ACCOMMDATN/FOOD	143
OTHER SERVICES	366
GOVT TOTAL	528
GOVT FEDERAL	631
GOVT STATE	667
GOVT LOCAL	527
UNCLASSIFIED	0

"D" indicates nondisclosed data.

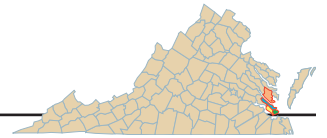
Source: Covered Employment and Wage data, Annualized 2002.



Average Weekly Wage

Williamsburg city

INDUSTRY SECTOR	2002 (\$)
****TOTAL****	516
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	826
MANUFACTURING	351
TRADE-WHOLESALE	936
TRADE-RETAIL	331
TRANSPORTATION	D
INFORMATION	661
FINANCE/INSURNC	930
REAL ESTATE	678
PROF/TECH SERV	994
MANAGMNT OF COS	D
ADMIN/WASTE SER	592
EDUCATIONAL SER	492
HEALTH CARE	717
ARTS/ENTER/REC	D
ACCOMMDATN/FOOD	292
OTHER SERVICES	410
GOVT TOTAL	727
GOVT FEDERAL	879
GOVT STATE	742
GOVT LOCAL	579
UNCLASSIFIED	0



Unemployment Rate Trends

Gloucester County

Year	Rate
2002	2.8
2001	2.3
2000	1.7
1999	2.3
1998	2.5

Year	Rate
1997	3.1
1996	3.7
1995	3.6
1994	4.5
1993	4.5

James City County

Year	Rate
2002	2.4
2001	1.9
2000	1.4
1999	2.0
1998	2.0

Year	Rate
1997	2.9
1996	3.0
1995	2.9
1994	3.0
1993	2.8

York County

Year	Rate
2002	2.6
2001	2.2
2000	1.6
1999	2.0
1998	2.0

Year	Rate
1997	2.7
1996	3.0
1995	2.9
1994	3.8
1993	3.7

Hampton city

Year	Rate
2002	4.9
2001	3.5
2000	2.7
1999	4.0
1998	3.7

Year	Rate
1997	5.2
1996	5.0
1995	5.5
1994	6.2
1993	6.2

Newport News city

Year	Rate
2002	4.9
2001	4.0
2000	2.8
1999	4.0
1998	4.0

Year	Rate
1997	5.2
1996	5.3
1995	5.6
1994	6.4
1993	6.3

Poquoson city

Year	Rate
2002	2.2
2001	2.3
2000	1.7
1999	2.2
1998	2.2

Year	Rate
1997	3.1
1996	3.0
1995	3.0
1994	3.3
1993	3.1

Williamsburg city

Year	Rate
2002	6.5
2001	6.2
2000	4.7
1999	5.8
1998	5.5

Year	Rate
1997	7.3
1996	8.3
1995	7.9
1994	10.3
1993	10.5

Source: Local Area Unemployment Statistics.



Population by Age

Gloucester County

	1990	2000	2010	2020	2030
0-14	6,941	7,447	5,624	6,172	6,785
15-24	3,651	4,035	4,886	3,971	4,020
25-34	5,345	4,113	4,628	5,010	3,759
35-44	5,001	6,468	4,392	4,488	5,462
45-54	3,354	5,067	7,586	4,441	5,027
55+	5,839	7,650	11,784	18,618	21,146
Total	30,131	34,780	38,900	42,700	46,200

James City County

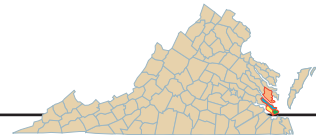
	1990	2000	2010	2020	2030
0-14	7,211	9,254	11,602	14,076	16,528
15-24	4,469	5,049	6,273	7,343	8,644
25-34	6,204	5,273	6,172	6,963	7,920
35-44	5,705	7,866	8,894	9,647	10,522
45-54	3,883	7,043	10,237	12,149	12,955
55+	7,387	13,617	19,822	27,322	35,431
Total	34,859	48,102	63,000	77,500	92,000

York County

	1990	2000	2010	2020	2030
0-14	10,298	13,444	14,367	16,314	18,552
15-24	5,749	6,702	8,532	10,313	9,763
25-34	6,737	6,430	7,742	9,421	8,672
35-44	7,795	10,827	8,462	8,281	11,154
45-54	5,357	8,488	12,270	9,120	9,166
55+	6,486	10,406	17,427	26,551	33,692
Total	42,422	56,297	68,800	80,000	91,000

Hampton city

	1990	2000	2010	2020	2030
0-14	28,523	29,624	26,268	25,450	24,492
15-24	22,853	24,255	22,258	18,609	19,201
25-34	26,286	21,662	20,206	19,224	17,104
35-44	19,292	25,880	16,950	17,359	17,052
45-54	13,354	18,133	24,168	13,848	14,497
55+	23,485	26,883	39,751	58,110	63,255
Total	133,793	146,437	149,600	152,600	155,600



Population by Age

Newport News city

	1990	2000	2010	2020	2030
0-14	40,348	42,089	38,069	36,952	35,654
15-24	27,178	28,066	26,257	22,089	22,891
25-34	36,683	28,448	26,736	25,815	22,919
35-44	23,595	29,485	19,492	20,038	19,900
45-54	14,574	20,773	27,577	15,647	16,190
55+	27,667	31,289	45,968	66,559	72,546
Total	170,045	180,150	184,100	187,100	190,100

Poquoson city

	1990	2000	2010	2020	2030
0-14	2,411	2,501	2,212	2,301	2,476
15-24	1,540	1,339	1,283	1,191	1,269
25-34	1,505	1,041	891	967	856
35-44	2,108	2,052	1,251	1,214	1,450
45-54	1,587	1,953	2,489	1,306	1,361
55+	1,854	2,680	3,873	5,321	5,188
Total	11,005	11,566	12,000	12,300	12,600

Williamsburg city

	1990	2000	2010	2020	2030
0-14	878	937	996	1,007	1,000
15-24	5,748	5,735	6,047	6,054	6,205
25-34	1,438	1,158	1,159	1,109	1,085
35-44	867	967	936	866	814
45-54	620	957	1,188	1,209	1,121
55+	1,979	2,244	2,773	3,254	3,675
Total	11,530	11,998	13,100	13,500	13,900



Employment by Industry

Gloucester County

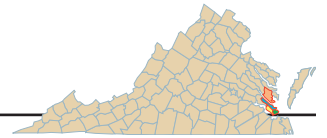
INDUSTRY SECTOR	2002
****TOTAL****	9,198
AGRICULTURE	55
MINING	D
UTILITIES	D
CONSTRUCTION	801
MANUFACTURING	270
TRADE-WHOLESALE	258
TRADE-RETAIL	1,714
TRANSPORTATION	203
INFORMATION	123
FINANCE/INSURNC	196
REAL ESTATE	125
PROF/TECH SERV	249
MANAGMNT OF COS	D
ADMIN/WASTE SER	227
EDUCATIONAL SER	53
HEALTH CARE	998
ARTS/ENTER/REC	223
ACCOMMDATN/FOOD	861
OTHER SERVICES	369
GOVT TOTAL	2,383
GOVT FEDERAL	104
GOVT STATE	786
GOVT LOCAL	1,493
UNCLASSIFIED	0

James City County

INDUSTRY SECTOR	2002
****TOTAL****	21,560
AGRICULTURE	39
MINING	D
UTILITIES	D
CONSTRUCTION	1,518
MANUFACTURING	2,420
TRADE-WHOLESALE	343
TRADE-RETAIL	2,525
TRANSPORTATION	176
INFORMATION	104
FINANCE/INSURNC	235
REAL ESTATE	673
PROF/TECH SERV	828
MANAGMNT OF COS	97
ADMIN/WASTE SER	835
EDUCATIONAL SER	61
HEALTH CARE	1,120
ARTS/ENTER/REC	D
ACCOMMDATN/FOOD	2,689
OTHER SERVICES	500
GOVT TOTAL	4,378
GOVT FEDERAL	28
GOVT STATE	1,675
GOVT LOCAL	2,675
UNCLASSIFIED	0

"D" indicates nondisclosed data.

Source: Covered Employment and Wage data, Annualized 2002.



Employment by Industry

York County

INDUSTRY SECTOR	2002
****TOTAL****	16,441
AGRICULTURE	26
MINING	D
UTILITIES	D
CONSTRUCTION	1,999
MANUFACTURING	635
TRADE-WHOLESALE	307
TRADE-RETAIL	2,134
TRANSPORTATION	104
INFORMATION	103
FINANCE/INSURNC	216
REAL ESTATE	409
PROF/TECH SERV	627
MANAGMNT OF COS	D
ADMIN/WASTE SER	1,485
EDUCATIONAL SER	37
HEALTH CARE	738
ARTS/ENTER/REC	451
ACCOMMDATN/FOOD	2,270
OTHER SERVICES	932
GOVT TOTAL	3,831
GOVT FEDERAL	896
GOVT STATE	306
GOVT LOCAL	2,629
UNCLASSIFIED	0

Hampton city

INDUSTRY SECTOR	2002
****TOTAL****	60,362
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	2,460
MANUFACTURING	4,681
TRADE-WHOLESALE	944
TRADE-RETAIL	8,586
TRANSPORTATION	397
INFORMATION	2,014
FINANCE/INSURNC	902
REAL ESTATE	899
PROF/TECH SERV	5,273
MANAGMNT OF COS	374
ADMIN/WASTE SER	3,663
EDUCATIONAL SER	1,775
HEALTH CARE	4,573
ARTS/ENTER/REC	403
ACCOMMDATN/FOOD	5,103
OTHER SERVICES	1,320
GOVT TOTAL	16,829
GOVT FEDERAL	8,027
GOVT STATE	1,223
GOVT LOCAL	7,579
UNCLASSIFIED	0

"D" indicates nondisclosed data.

Source: Covered Employment and Wage data, Annualized 2002.



Employment by Industry

Newport News city

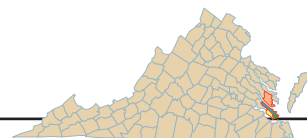
INDUSTRY SECTOR	2002
****TOTAL****	93,133
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	3,782
MANUFACTURING	22,555
TRADE-WHOLESALE	1,976
TRADE-RETAIL	9,869
TRANSPORTATION	2,372
INFORMATION	2,238
FINANCE/INSURNC	1,727
REAL ESTATE	1,508
PROF/TECH SERV	5,822
MANAGMNT OF COS	D
ADMIN/WASTE SER	5,880
EDUCATIONAL SER	756
HEALTH CARE	8,893
ARTS/ENTER/REC	879
ACCOMMDATN/FOOD	5,905
OTHER SERVICES	2,425
GOVT TOTAL	15,644
GOVT FEDERAL	4,717
GOVT STATE	1,471
GOVT LOCAL	9,457
UNCLASSIFIED	0

Poquoson city

INDUSTRY SECTOR	2002
****TOTAL****	1,748
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	159
MANUFACTURING	15
TRADE-WHOLESALE	D
TRADE-RETAIL	339
TRANSPORTATION	D
INFORMATION	D
FINANCE/INSURNC	D
REAL ESTATE	41
PROF/TECH SERV	60
MANAGMNT OF COS	D
ADMIN/WASTE SER	36
EDUCATIONAL SER	15
HEALTH CARE	155
ARTS/ENTER/REC	D
ACCOMMDATN/FOOD	224
OTHER SERVICES	75
GOVT TOTAL	545
GOVT FEDERAL	1
GOVT STATE	1
GOVT LOCAL	544
UNCLASSIFIED	0

"D" indicates nondisclosed data.

Source: Covered Employment and Wage data, Annualized 2002.



Employment by Industry

Williamsburg city

INDUSTRY SECTOR	2002
****TOTAL****	19,177
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	219
MANUFACTURING	46
TRADE-WHOLESALE	86
TRADE-RETAIL	2,841
TRANSPORTATION	D
INFORMATION	172
FINANCE/INSURNC	238
REAL ESTATE	783
PROF/TECH SERV	550
MANAGMNT OF COS	D
ADMIN/WASTE SER	303
EDUCATIONAL SER	113
HEALTH CARE	1,817
ARTS/ENTER/REC	D
ACCOMMDATN/FOOD	5,791
OTHER SERVICES	401
GOVT TOTAL	3,233
GOVT FEDERAL	206
GOVT STATE	2,558
GOVT LOCAL	469
UNCLASSIFIED	0

"D" indicates nondisclosed data.

Source: Covered Employment and Wage data, Annualized 2002.